CHIP

MALAYSIA

www.chip.com.my

internationally trusted technology magazine

A Glimpse Into The Technology Of 2016

A sneak-peek into the technology of tomorrow, today

REVIEWS: MSI GT72S 6QE Dominator Pro G, GIGABYTE P34Wv5, ASUS Maximus VIII Formula, Sony Xperia Z5 Premium, Microsoft Surface Pro 4

OKI

JAPAN · 1881

New MFP
MB472dnw / MB492dn
ES5162
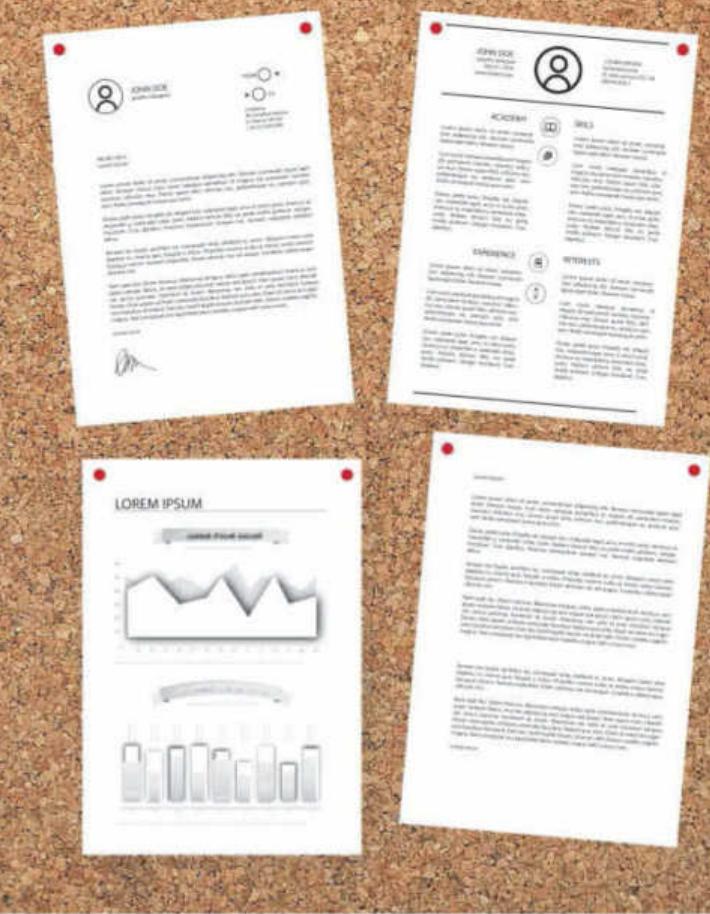
New Printer
B412dn / B432dn / B512dn
ES4132dn

- Fast print speed up to 45ppm
- Duplex and network ready, optional Wireless
- Apple AirPrint and Google Cloud Print ready
- Banner printing up to 1.3m long
- Secure printing to protect confidential documents

High performance A4 mono printer & A4 mono multifunction printer for more demanding user

Netflix And Chill

The month of January has been a pretty busy one internationally, although locally, things are a bit more quiet. The annual Consumer Electronics Expo has come and left, showcasing some of the things we can begin to look forward to throughout the year, and by the looks of it, the showstealers at this year's event look to be the guys doing virtual reality and smart car systems.

The usual assortment of consumer electronics can also be seen at the events, such as computers, laptops, but perhaps the biggest announcement that happened at CES was that Netflix went global. Personally, as soon as we heard the news, we immediately accessed their website and when we saw the option to register for an account, we did so and took full advantage of the month-long trial that they had on offer. Of course, the content that we get here in South East Asia isn't nearly as vast as the ones that America enjoys, but it's something. So far, we've binged on Brooklyn Nine-Nine, Marvel's Jessica Jones, Breaking Bad and a couple of food documentaries.

As far as reviews go, this month we have quite a selection of devices that we managed to get our hands on. On the wearables front, we've got the Pebble Time, ASUS ZenWatch 2 and honor Band Z1. As for laptops, we have the Microsoft Surface Pro 4, MSI's new GT72S, the Lenovo IdeaCentre Y700 and the new Yoga 900, and GIGABYTE were also generous enough to spring a surprise for us with the GIGABYTE P34Wv5.

CHIP Malaysia

International Members of the CHIP Family

| China | Czech Republic | Germany | Hungary | India | Indonesia | Italy | Netherlands | Poland | Romania | Russia | Thailand | Turkey | Ukraine |

contents

TEST LAB

LITE & LEISURE

PRACTICE
REGULARS

086

CHIP Downloads February 2016

We're back with our monthly dose of interesting, free and handy tools for you to enhance your PC experience. If you want to know how you can get these files, follow the instructions below:

1. Head on our website @ www.chip.com.my and right at the top, click on the 'Downloads" tab
2. After that, click on the respective month's post. You will then be prompted for a password. The password can be found on this page monthly.
3. Navigate using the tabs and pick the categories you want to download the files from. Once you find the file you want, just click on it and you're good to go!

And it's as easy as that!

PASSWORD FOR FEBRUARY 2016 - terabyte

Featured Tools

SpyOff

If there's a site you can't access due to geological blocks, then what you need is a Virtual Private Networks (VPN) like SpyOff. With SpyOff, you get a secured connection for your internet traffic, thus bypassing blocks and providing you with protection against data sniffing. For example, you could use SpyOff to bypass the region lock on Netflix.

Movavi Screen Capture Studio SE

Are you someone who needs PC screen capturing for content creation? Movavi Screen Capture Studio SE is what you need then. With this programme, you can do either capture your entire screen, a single window, or video streams. In addition, you can take the footage or material captured and directly edit them within the programme. This programme will allow you to trim out unwanted footage, tweak the audio, and share the videos straight to the Internet. Kindly note that not all codecs are supported, though major ones like AVI, MOV, WMV, WMA, WAV and FLAC are usable.

Essentials

Our list of essentials consists of programs and software such as graphic drivers, browsers, compression software and even Cloud storage software that will improve a PC user's experience. The links on our website won't provide you with the files, instead it will lead you to the developers' official website, where you can find the right file for you.

The Monthly Downloads

AquaSnap
Operating system: Win XP/Vista/7/8/10

Introduced in Windows 7 is a feature called Aero Snap that allowed a user to arrange two individual windows next to each other on the desktop. AquaSnap takes it a step further with plenty of interesting features such as the AquaMagnet which attaches windows to each other at the edges and the AquaShake that makes a window transparent when you move a window.

Razer Cortex : Game Booster
Operating system: WinVista/7/8/10

Even with some of the latest hardware, are you still struggling to play the latest games? Game Booster scans your computer for games and then at a click of a button the tool disables unwanted RAM programs and CPU blockers to release resources to allow you to play smoothly.

Iperius Backup
Operating system: Win 8/10

There are hardly any other backup solutions like Iperius Backup which are free and offers so much in terms of features and settings. All you have to do is start a new backup job and follow the tabs and instructions on the top margin, step by step. The software can compress your backed up data and save it as a ZIP file which you can easily transfer to a new PC.
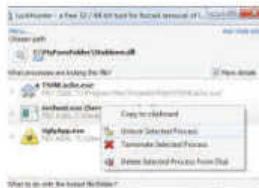
LockHunter
Operating system: Win XP/Vista/78

Ever had the problem that when you're trying to delete a bulk of files, or maybe when you're clearing an old folder for a program you just uninstalled, there's sometimes a file that's still in use so you can't delete it? LockHunter can help you with that, by analysing and then after a brief diagnosis, lets you know which program is using the file.

IObit Driver Booster
Operating system: Win XP/Vista/7/8/10

Keep your drivers up to date with IObit Driver Booster. With just a click of a button, IObit Driver Booster scans your system and will show you which drivers are old, then by clicking Update the program will download the latest versions of the drivers and install them. If a driver just so happens to cause an issue after installation, you can roll-back your changes using the Roll-back function.
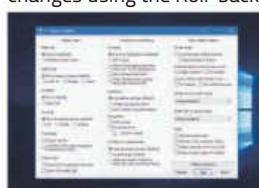
7+ Taskbar Tweaker
Operating system: Win 7/8/10

Since the day of old the task bar has been an important piece of UI that is seen across multiple OS'. Using the free Taskbar Tweaker, you can customise the taskbar according to your needs. You can arrange the miniature views of windows via drag & drop, you can also define the start of the Task Manager by double-clicking on the bar.

Zero Install
Operating system: Win XP/Vista/7/8

Zero Install is a collection of Open Source tools which you can use without installation. You can access the practical software like Inkscape, Firefox, or Gimp via an alphabetical list. By simply clicking on the Start button, the corresponding tools are downloaded and can be started as usual.
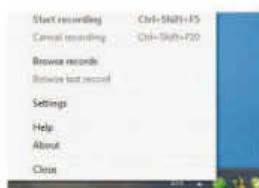
Skype Auto Recorder
Operating system: Win XP/Vista/7/8

Skype Auto Recorder runs in the background as a Tray icon and doesn't require installation. While using Skype you can start recording, access older recordings or customise the options. You can decide where to save recordings through the options by right-clicking the grey dot.

Paint.NET Megalo Effects Pack
Operating system: Win XUP/Vista/7/8/10

Paint.NET is an extensive and free photo editing tool that comes with awesome effect packs which you can download from the internet. The Megalo Effects Pack is one of them and comes with effects ranging from photo filters like blur U, to artistic gimmicks like pencil sketches or comic look. You can also get a Preview of the effect just before you apply it for less hassle.

Soo Ze Xin, Product Manager, Haier Electrical Appliances (M) Sdn Bhd(third from left) together with Shi Zhiyuan, Managing Director, Haier Electrical Appliances (M) Sdn Bhd(third from right) and brand ambassadors officiating the launch of the Haier U5000 Smart TV series

Haier Plays It Smart With The U5000 Series

Haier launches a series of smart televisions aimed for entertainment and as a multimedia center

With a profound understanding of today's lifestyle and how it can be improved by the latest technology, Haier has launched their U5000 series of smart televisions. The U5000 series consists of a 49-inch, 43-inch and 40-inch screen smart televisions that allows convenient access to Malaysia's top rated apps such as Google's Chrome Browser, YouTube and Lazada.

Shi Zhiyuan, Managing Director of Haier Electrical Appliances (M) Sdn Bhd said "The Haier U5000 series of smart televisions is power play of TV entertainment and multimedia center. It brings clarity of picture quality, enhancement of audio quality, power of internet and the fulfillment of media streaming, gaming and accessing apps to consumer's televisions with Haier's smart technology."

The Haier U5000 series range has obtained the official Google Mobile Services (GMS) certification globally and Malaysian users can now revel in a smart television with installed Google Play Store, enabling access to unlimited and full scalability of downloadable apps. Smart features, vivid sensory experience and beneficial eco factors stand out in the latest Haier U5000 series, equipped with the latest technological innovations, going above and beyond design and quality.

To enable the Haier U5000 series televisions to be feature rich while providing a smooth experience, Haier delivers with top range hardware such as a quad-core CPU and 4 core GPU that ensures your experience will be a great one. The Haier U5000 series runs on Android 4.4 that is the tested best system for television and comes with an 8GB internal flash memory in addition to WiFi access on Full-HD 1080p quality.

Not lacking in the display department, Haier U5000 series smart televisions displays brilliant picture quality on Full-HD 1080p, with H.265 support, the latest in compression techniques that enhance transmission, and high efficiency coding supporting HD content decode formats and providing a smoother and uninterrupted HD picture quality. Rich pixel density and intense colour contrast are delivered via the 3D comb-filter and Haier LED Backlight Technology with High Dynamic Contrast. Furthermore, the 'super-slim bezel" of the Haier U5000 series is perfect for an immersive television watching experience because the screen is now free from being boxed-in.

The retail pricing for the Haier U5000 series 49-inch Smart TV is RM2,599, 43-inch is RM1,899, and the 40-inch model at RM1,699. As an added bonus, users of the U5000 series 49-inch Smart TV can enjoy free half-year subscription to The Star e-paper.
www.haier.com.my

The U5000 series looks great, crisp and clear when it comes to text and images

The honor Band Z1 features a metal body as the base and has no physical button

Allen An, E-commerce Director of Honor Malaysia, posing with Honor's brand ambassador's Thomas and Jack

The honor 5X fits is a fantastic midrange device that even has a fingerprint sensor

Honor Malaysia Honors Fans With New Devices

A new smartband and two new smartphones make an appearance at honor Malaysia's launch

honor has recently launched its honor 5X, honor 7 enhanced edition, and the new Band Z1. In a media briefing held at Glasshouse Seputeh, Honor Malaysia announced that all three new products will be available for purchase via the brand's local online retail site vmall.my.

First of the three to be available, the honor Band Z1 functions as an in between between a smartband and an actual smartwatch. It's designed to be practical and easy to use, with no buttons involved in its operation. To give it a solid build, steel was used as the base of its construction, while a simple strap completes the design.

"The honor Band Z1 is our answer to fans who are looking for a smartband that encompasses both elegance and simplicity, yet packed with the powerful technologies that honor is renowned for. As a smart accessory, the honor Band Z1 offers useful features such as health and sleep tracking, and serves as a notification centre on the wrist that is easy to access. It is the perfect partner to augment your busy lifestyle," said Allen An, E-commerce Director, honor Malaysia.

Indeed, the honor Band Z1 boasts a wealth of features, including support for multiple languages, accurate health tracking, dust-proof and waterproof at IP68 certified, and more.

The honor Band Z1 will cost RM259 and can be purchased from VMALL.MY, Lazada or DirectD.

honor launch of the 5X and 7 enhanced edition is also exciting news for honor fans, as both devices are great smartphones packed with features.

Allen An commented on the two device as well, stating that "both the honor 5X and 7 enhanced edition are statements of our capability to offer quality-built products that employ creative technology, and reinforces our commitment to creating and bringing superior mobile internet experiences as we expand our worldwide presence."

The honor 5X comes with a highly accurate fingerprint sensor that can unlock the device in 0.5 seconds, used to launch apps, and more. It also features like a 5.5-inch Full HD IPS display, as well as a F2.0 aperture 13MP back camera with a wide-angle lens. The 5X is powered by a Qualcomm Snapdragon 615 octa-core processor, 2GB of RAM, and 16GB of storage.

Equally powerful is the new enhanced edition of the honor 7, which now features a new Gold coloured model, 32GB of onboard storage, and a Fast Charger. It still houses a Kirin 935 chipset and 3GB of RAM for superior performance, and will come with the same 20MP back camera.

Both the honor 5X and honor 7 enhanced edition are not officially available yet, but interested buyers can register their interest for either devices at www.vmall.my.

www.vmall.my

Nora Danish As Ambassador For The OPPO F1

Beauty in the eyes of the selfie ambassador

With the recent launch of OPPO's F1 smartphone, the first product of the newly announced F series to the Malaysian market, OPPO has introduced Nora Danish as the selfies ambassador of the OPPO F1. Nora is prominent actress who is popular for her skill of taking beautiful selfies, even gathering over 2.9 million followers on her Instagram account alone, making her the perfect representative for the F1.

The F1 is OPPO's feather-light star performer, supported by OPPO's great build quality and impressive design, the F1 features a standout 8MP front-facing selfie camera that comes with a sophisticated photography platform and powerful software, specially designed to capture stunning Selfies effortlessly. All at a price of RM1,198, believed to be a device that punches well above its price.

Chen Lu, the Brand Manager of OPPO

Electronics said 'The F1 is designed especially for selfie-lovers who can skip all the hassle of putting on full makeup, and still look good effortlessly and naturally. We are extremely thrilled to have our lovely Nora on board with us as the face of this new selfie savvy phone, because Nora is truly a trend-setter in mastering the art of selfies. In fact, her successful lifestyle has attracted more than 20 thousand fan 'likes' on Instagram on average per selfie. Her beauty, social savviness, expertise in her work and humble personality are values that align with OPPO's brand."

Nora also had this to say, 'Capturing selfies is not just a way to express yourself, it is also a way of celebrating life and serves to mark that you are living your life to the fullest! Selfies can even be powerful statements to inspire people to achieve great things in their lives. So when OPPO contacted me to represent this game-changing selfie camera phone, I felt so honoured, it has proven to be my new secret weapon to take perfect selfies."

The OPPO F1 is open for online purchases for the device starting 22 January 2016 at OPPOStore.com.my and for the first 200 customers who purchased the F1, will receive a free OPPO Selfie Stick. While on 25 January 2016 onwards, the F1 is available for purchase offline.

www.oppostore.com.my
www.oppo.com/my/

The 8MP f / 2.0 wide-aperture lens is sure to let you take beautiful selfies.

Taking a closer look at the Olympus PEN-F with its exquisite modern classic design

More those who like matte, the PEN-F comes in full black

Lucas Tan, Regional Product Trainer, Olympus Corporation Asia Pacific(left) and Mitsuhiro Tanaka, Manager, Imaging Business Division, Southeast Asia and Oceania, Olympus Corporation of Asia Pacific Limited, flanked by two models

Olympus Launches The PEN-F

Melding a classic design with the modern touch of technology

Olympus was proud to announce the launch of their Olympus PEN-F, the latest model in the PEN series of Compact System Cameras. The PEN-F sports a classic design that exudes quality and 'masterpiece' craftsmanship. Designed for reportage, documentary and travel photography, the PEN-F uses a new 20-megapixel Live MOS sensor and has a built-in 5-Axis Image Stabilisation (IS) system that achieves up to 5 EV steps of stability for the highest quality handheld imaging.

Paired together with the shortest shutter release shutter release lag amongst compact system cameras of 44ms, the super responsive PEN-F helps you capture the fleetest of photographic opportunities to record your most decisive moments. Not to mention its new Colour Profile feature that allows you to switch between Monochrome and other Colour Profiles, enabling for classic film-like photos and many others on the fly.

The PEN-F is also the first Olympus PEN model with a built-in viewfinder, using a 2.35M dot OLED. If you are a photographer that can appreciate photographic instruments of fine design and quality, the Olympus PEN-F captures attention with its beautiful classic styling that is inspired by the elegant Olympus PEN F 35mm film camera of 1963. The new PEN-F is designed with incredible ergonomics to fit comfortably in any photographers' hands, combined with its milled-metal click-dented dials and control switches that feature diamond-cut edges, paired with the precise touch and feedback response of its mechanical interfaces, provide the photographer with a luxuriously tactile usage experience.

As said before, the PEN-F sports a 20-megapixel Live MOS sensor, that together with the Truepic VII imaging engine that gives the PEN-F the highest imaging resolution amongst Olympus' compact system cameras. Together with the proven in-built Olympus 5-Axis VCM IS system and high-resolution M.Zuiko lenses, you are assured of the highest quality handheld stills and video results. When it comes to the special Hi-res Shot mode, the PEN-F captures 50-megapixel jpeg shots by automatically compositing multiple shots, taken with the shifting of image sensor in ultra-precise half-pixel steps.

The PEN-F is the first Olympus camera to have a Monochrome and Colour Profile Control feature, that is accessed using the front-facing Creative Dial. The profile control provides user-customisable tone and saturation image presets that simulate the appearance of classic colour and black and white film. The Creative Dial also provides quick access to Art Filters and the special Colour Creator mode, which enables intuitive, preview-able application of colour hue and saturation adjustments. The PEN-F comes with a great design and features, not to mention amazing imaging technology, the new Olympus PEN-F is a true masterpiece.

www.olympusimage.com.my/

Leaders once again

Our recent industry recommendations

 VS

⌶ Real world Protection Test

(March - June 2015)

Source: AV Comparatives

www.av-comparatives.org
2015 by AV-Comparatives®
*Only first 12 positions have been included.

1st
99,9%

Panda
BitDefender
Kaspersky
Trend Micro
Avira
Tencent
Emsisoft
Avast
F-Secure
Fortinet
eScan
Eset

99,8%
99,7%
99,7%
99,7%
99,5%

98,9%
98,7%
98,7%
98,7%
98,8%
98,8%
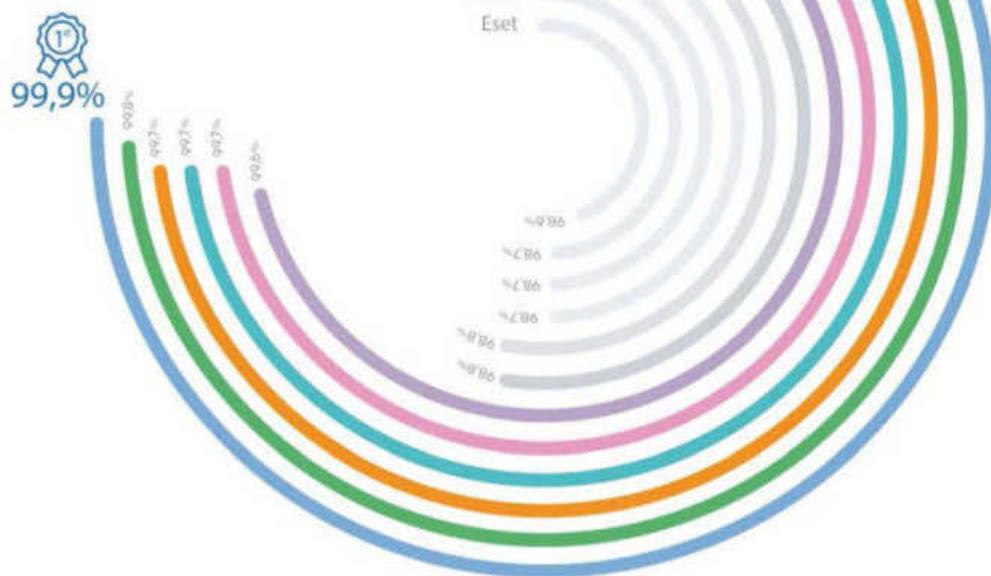
"Real world Protection Test" result per month (March - June 2015)
Source: 2015 by AV-Comparatives® | www.av-comparatives.org

March	April	May	June	August
99,8% blocked	100% blocked	100% blocked	100% blocked	100% blocked

---

Windows 8/8.1 Protection test
Source: Av-Test. June 2015 | www.av-test.org

100% blocked

Protection test
Protection against malware infections
●●●●●● 6/6

2s

Performance test
Average influence of the product on computer speed in daily usage
●●●●●○ 5/6

Usability test
Impact of the security software on the usability of the whole computer
●●●●●● 6/6

AV | vb 100 VIRUS | AV TEST CERTIFIED

 panda

The new Philips curved monitor was a sight to behold, 34-inches of smooth curvature and great colours

The smaller but just as curvy 27-inch monitor was also there to catch the eyes of the audience

Paul Tsai, Senior Project Manager, Asia Pacific Sales Division, MMD Singapore Pte Ltd(left) and Kan Yeung, Regional Sales Director, MMD Singapore Pte Ltd with models

Philips Launches 5 Exciting New Monitors

Ranging from regular monitors to curved monitors, Philips updates their line of monitors

Philips has launched 5 exciting new monitor models which combine style, functionality and connectivity, bringing a whole new level of immersive multimedia experience. Philips is always putting advanced technology and innovation to work, as well as striving to give you the best possible experience with computer monitors, which is why Philips monitors have features that are designed with you in mind.

"Consumers these days are looking for computer monitors that have superb picture quality and an elegant design that would fit into the modern décor of their homes or offices. But on top of that, they also want technology that cares," said Kan Yeung, Regional Sales Director of MMD Singapore Pte Ltd. "The new line of Philips Monitors lessens eye fatigue with Flicker Free Technology, features low power consumption to help you cut down your electricity bills and have eco-friendly mercury-free display."

Stealing the spotlight of course was the BDM3490UC 34-inch 21:9 Curved Ultra-Wide LCD Monitor. It sports an edge-to-edge glass and narrow border design for a seamless appearance and features an UltraWide QHD 3440x1440 resolution AH-IPS display for crystal clear images at wide viewing angles. Not only that, the BDM3490UC has a 99% sRGB colour standard for true-to-life colour and DisplayPort for maximum visual quality.

Besides the BDM3490UC 34 monitor, Philips also announced two curved monitors in the form of the BDM3490UC and the 279X6QJSW. The 279X6QJSW is a Full HD 27-inch curved monitor has AMD's FreeSync technology built in, and a 178-degree wide viewing angle paired together with Flicker-free technology for a comfortable and immersive experience. Additionally, there is the 276E7QDSW/B 27-inch Full HD Monitor that features an IPS-PLS LED wide-view technology, super slim narrow bezel, wide colour gamut and a VESA mount for easy mounting.

Then finally we have the 237E7QDSW/B 23-inch Full HD LCD Monitor and the 227E7QDSW/B 21.5-inch Full HD Monitor that both sport an AH-IPS Display, mercury free eco-friendly borderless display with Flicker-free technology and an elegant, slim, yet low power consumption design. These five monitors are coming soon so look for out for its availability.

www.mmd-p.com
philips.com/monitors

Jimmy Lin (third from right), ASUS Malaysia Country Manager, shows off the new ASUS ZenFone Zoom

ASUS launches ZenFone Zoom

The Taiwan company showed off its new optical zoom capable smartphone, as well as a few new upcoming products

ASUS Malaysia has just launched its new ZenFone Zoom smartphone and teased the media with a showcase of other upcoming products, at a media launch yesterday. The ASUS ZenFone Zoom is now available locally, while the other new products are slated to be arriving on our shores near the end of January.

The ZenFone Zoom is a slim device with a great 5.5-inch Full HD IPS display, and comes in either Pure Black or Ceramic White colours. What gives it the 'Zoom' moniker is the 3x optical-zoom for the 13MP rear camera, which also has a 10-element Hoya lens inside for up to 12x magnification. As a bonus, it comes with optical image stabilisation (OIS) to avoid blurry shots from shaky hands.

ASUS designed the Zoom to be as intuitive as possible by including dedicated buttons for photo capture, video recording controls and zoom controls. The photo capture button also works as a shortcut button to launch the ZenUI camera app, which has a Super Resolution mode that can capture up to 52MP.

Under the cover of the smartphone is a quad-core Intel Atom processor and 4GB RAM for a smooth user experience. Moreover, it has a high capacity 3,000 mAh battery to last you through the day.

Speaking at the launch, ASUS Malaysia Country Manager, Jimmy Lin expressed the company's confidence in the new product. "With ZenFone 2, we created an incredible and widely-praised smartphone that captures stunning, high-resolution photos in everyday life. Now, with the ASUS ZenFone Zoom, we offer users a smartphone that has not only the look and feel of a DSLR camera, but the advanced features to match. With ASUS ZenFone Zoom, we are putting professional photography within the reach of everyone," he said.

Combining its slim body and photography capabilities, the ZenFone Zoom is just the alternative to a DSLR, especially if need to take quality pictures without carrying heavy gear around. The ZenFone Zoom is now available for RM2,099.

While not touched during the product briefing, ASUS also teased the media with some upcoming new products at the showcase area during the launch. This includes the new ZenBook Pro UX501, a 15.6-inch laptop that oozes class; the ZenAiO Pro, a premium all-in-one PC that also looks good and performs well; the ZenFone 2 Deluxe Special Edition, which has a luxurious race-car design to it and a swappable rear covers; as well as the much anticipated ZenWatch 2, the next iteration of the Android Wear device. ◗

www.asus.com/my

At the back is the key feature of the ASUS ZenFone Zoom, its 3X Optical Zoom rear camera

Hong Leong Bank Now Uses IBM Watson

The cognitive learning system is poised to help the bank improve on customer services, beginning with its credit card services

Hong Leong Bank Berhad had just signed a partnership with IBM which would see the bank employ the technology giant's IBM Watson platform.

The financial services organisation is the first bank in Malaysia that will be using this platform. For those who don't know, IBM Watson is a cognitive learning system, basically a system that can 'learn'. With IBM Watson, Hong Leong Bank will have better customer support for its credit card services. The programme is broken down to a few stages, where the first one will see the cognitive technology behind IBM Watson used as an online customer self-service advisor. Using the technology to in place of a human staff allows Hong Leong Bank to service its customers 24/7. At the same time, it will be able to support the Bank's call centre service advisors. Additionally, the system is able to analyse large volumes of data, so that it can identify a customer's needs and thus respond with the best option; this is, essentially, Big Data Analytics.

"Customers have come to expect higher levels of integrated and timely service, with an increasing need for exceptional phone and online experience. We need to ensure that our systems are able to anticipate customer needs so that we may proactively provide solutions. The IBM Watson technology provides us this advantage by allowing us to understand the context of customer needs and preferences, which will reduce call waiting time and ensure greater consistency and accuracy of information" said Edward Pinto, Chief Operating Officer for Customer Experience & Analytics, Hong Leong Bank. Pinto also commented that the implementation of the IBM Watson system is a crucial part of the bank's goal towards digitisation.

IBM Malaysia's Managing Director, Chong Chye Neo, who was present at the signing, said: "Cognitive banking builds upon the personalisation and digitisation trends in banking over the last decade. The future bank is knowledge driven and convenes operations and offerings around its customers and their economic choices. This strategic partnership with Hong Leong Bank Berhad allows them to anticipate and respond to the changing market; and transform the relationship between the bank and its customers."

www.hlb.com.my

Chief Operating Officer of Hong Leong Bank's Customer Experience and Analytics division, Edward Pinto, shakes the hand of IBM Malaysia's Managing Director Chong Chye Neo, as they exchange signed documents and formulised the partnership between both companies.

A participant getting ready for the contest

With the contest underway, the contestant is working hard to diagnose the problem provided and resolve it

The Samsung Malaysia Electronics Team giving the thumbs up for the contest to start

Samsung Pledges To Continue Providing The Best In Customer Service

To fulfill this pledge, Samsung Malaysia invited the media to witness its in-corporation contest for its service staff called the 3S Smart Service contest

In a recent media briefing, Samsung Malaysia Electronics Sdn Bhd has declared its strong commitment to continue providing high quality after sales service. To that end, the company organised a contest that pit teams of Samsung staff nationwide (from its service and call centres) against each other. The contest is called the 3S Smart Service contest, with the 3S representing the firm's motto: Speed, solution and satisfaction.

Other than as an opportunity for staff to show off their skills, the contest is also a means for them to learn more, upgrade their skills and improve technical knowledge, all in order to better respond to the needs of customers. It is also a means to encourage Samsung's service centres and call centres to work hard in achieve greater customer satisfaction.

"The key objective of 3S Smart Service Contest is to highlight the importance of mastering a high level of Technical Knowledge and Repair skills. At the same time, to show empathy to our valued customers that we care for them," said Park Jae Doo, Director, Customer Satisfaction Team, Samsung Southeast Asia & Oceania.

For the uninitiated, the Samsung Smart Service is a programmed created to provide Samsung customers with personalised service experience. With that ideology in mind, the programme would train staff to swiftly respond to a customer's needs, offer quick solutions to problems encountered, do home visits to customers for convenient, and also to operate a 24/7 care line. Customers can also update the software of their devices in Samsung stores, get free setup and installation, replacement of components, and more.

To make it convenient and accessible for Malaysian customers, there are a total of 151 smartphone service points in Malaysia, along with 94 service points for consumer electronics. Not only that, Samsung also has about 126 stores and dealers across the country, which can serve as drop off and collection points for customers. As for Express Service Centres, Samsung says that most major cities will have one such centre.

www.samsung.com/my/support

KT Ong and Tan Hiang posing with the new Dell laptops

Dell's Big Announcement Brings New Lineup Of Products To Malaysian Shore

The electronics giant introduced a new range of laptops, desktops, monitors and printers

Dell has been really active in January, mostly thanks to CES 2016. Recently, Dell Malaysia has announced the local availability of new products showcased at the annual electronics show. This includes workstations, notebooks, and also monitors.

To better stand out in the market, Dell collaborated and partnered with Intel and Microsoft to design its new products.

When approached for a comment on the company's focus this year, the General manager for Commercial Business of Dell Malaysia, KT Ong, explained that the company is aiming

to deliver "powerful and beautifully-balanced products" to customers. 'We are investing in this part of our business like never before, bringing new innovations to market that are redefining the role of the PC – whether it's an ultra-mobile 2-in-1 or a desktop that now handles workloads for a mobile workforce who require a robust collaboration solution," he said.

Country Manager for Intel Malaysia and Singapore, Sumner Lemon, also commented that "The concept of a future

workforce is one that is taking place now. Every day, we see the transformation of teams that are more mobile and seamless – collaborating in a borderless, high-performing environment. Intel is critical to this evolution. Devices built with our partners Dell and Microsoft, which feature Intel technology such as our 6th Gen Intel Core processors, are purpose-built to deliver a more impactful experience for business and pleasure through an optimal blend of mobility and performance."

Among the new range of products is the Latitude series, namely the Latitude 13 7000, Latitude 12 7000, and Latitude 11 5000. The Latitude notebooks are designed with business-class security, manageability and reliability in mind. Dell also refreshed the Latitude 3000, 5000 and 7000 Series, making them lighter, more powerful and efficient.

Dell also introduced new OptiPlex Desktops. These desktops are designed for the commercial market and are also designed to be secure. The new OptiPlex PCs are smaller, faster and have better energy efficiency. They come in Micro Form Factor, Small Form Factor, and Mini Tower designs.

Next up is the monitor category, which sees a new entry that amazed CES 2016 – the Dell UltraSharp 30. It is a UHD OLED monitor that is not only powered, but can also receive display input via a single USB Type-C port that supports Thunderbolt 3. Besides that, Dell also launched a new series of monitors that are dubbed UltraSharp InfinityEdge monitors.

Lastly, Dell has revealed a new Document Hub and some Mulfunction Printers (MFP). For businesses to better collaborate online, Dell has the new H-Series and S-Series MFPs. The first series has models that come with the Dell Document Hub, a feature that allows customers to access different cloud storage services simultaneously. While the S-Series smart MFPs have superior built-in security features that are large enterprises would need.
www.dell.com.my

Dell Precision 15 5000 series

EXMobile Launches The VoLte Series and EX Watch

A stylish smartphone and smart watch you should look out for

The EX Watch exudes a luxurious feel with its clean and rustic design

EXMobile has unveiled their latest VoLte series of smartphones together with the EX Watch for the Malaysian market. EXMobile has built up a solid network with over 800 Malaysia after being in the business for 6 years. There are also 10 service centres nationwide, with EXMobile generating over RM50 million in annual revenue for 2015, by hitting over 100 thousand units of devices sales under its brand.

"From 2014 to 2015, 4 out of 5 top Malaysia based Taiwanese/International brands fell in market share. The only vendor with growth had put their focus on budget conscious consumers. Also, due to the weakening Ringgit currency, the drop has brought big impact to the mobile market, which caused the purchasing power of local consumers to drop correspondingly. This gives opportunity to local mobile device manufacturers", said EXMobile's Head of Business Development, Mr.Leng Chong Yap.

The EXMobile Volte series smartphones mark the company's initiative on rebuilding a new brand image with the aim to release better quality and move impressive design products, which include the VoLte series. EXMobile also plans to focus more on the youth market in the future to launch a series of, stylish yet innovative devices to attract younger generations.

The latest VoLte 2 smartphone sports a 5-inch display with a resolution of 1280x720 pixels in a Super Colour TCL IPS screen. The screen also sports a 320PPI pixel destiny which

The VoLte 2 will run on Android 5.1.1 Lollipop right out of the box

is surfaced with 2.5D curved glass and coated with a nano coating covering both the front and back panel, presenting an elegant exterior design with a premium finish. Under the VoLte 2 hood is a Mediatek 6735A quad-core processor together with 2GB of RAM and 16GB of built-in storage, then powering the VoLte 2 is a 2,200mAh battery.

Being unveiled along with the VoLte 2 smartphone was the EX Watch, another smart watch produced by EXMobile that offers a 12.2-inch 240 x 240 pixel HD IPS round display. Its display uses a Nanometer tempered glass with full bonding process. The body dimension measurements of the watch are 52 x 46 x 13.5mm and runs on a MT2502A 108MHz SoC that's paired with 128MB of RAM and 32MB of storage, but no worries on storage as the watch supports an additional 8GB of space through microSD.

The EX Watch features a Pedometer, Sleep monitor, Anti-lost, Sedentary reminder, Heart rate monitor, and a Remote camera. It's also IP65 waterproof and allows for Synchronous SMS, MMS, and Time Sync.

The VoLte 2 is now available at authorised stores and dealers nationwide with the retail price of RM549, while the EX Watch is priced at RM399 and should be available sometime in Q1 2016. It's available in Silver, Black, Rose Gold, Royal Blue and Gold.

www.exmobile.com.my

(From left to right) EXMobile Head of Business Development, Mr.Yap Chong Leng, EXMobile Head of Product, Mr.Teh Nam Hong, EXMobile CEO, Mr.Eddie Law, , EXMobile Volte Series ambassador Yu Tian Long and EXmobile brand ambassador Rashid Sidek

Case Mod Elites Assemble!

Cooler Master announces Case Mod World Series 2016

Continuing the previous years' successful events, Cooler Master has recently announced the return of the Case Mod World Series 2016, a competitive modding event designed to connect modders everywhere with USD30,000 in cash and prizes to be won.

For this year's competition, Cooler Master has brought in sponsors such as ASUS, Avexir, Dremel, NVIDIA, and OCZ to support and engage with the PC modding community. This year marks the Case Mod World Series' seventh instalment and Cooler Master is expanding the scope of the series to include local meet and greets, as well as modding sessions.

Judges on this year's panel will feature recognized names from around the globe – Ermanno Bonandini from Italy, Ronnie Hara from Brazil via Japan, Richard Keirsgieter from The Netherlands, Antony Leather from The UK, Richard Surroz and Brian Farrell from USA, including ASUS, Avexir, Dremel, NVIDIA, and OCZ. From their respective fields of expertise, they will be basing their scores on four equally weighted areas: complexity, design, originality, and overall looks.

Not only do the modders stand a chance to win the USD30,000 jackpot, they can share their creative design and passion for all things PC with a worldwide audience and fire up their creative juices with other local modders through regional events. Cooler Master will also be providing an online platform where photos and detailed worklogs can fuel other aspiring creators.

As was last year, CHIP Malaysia will be a media partner for the Case Mod World Series 2016, so look out for monthly updates on the competition in future issues of the magazine!

mod.coolermaster.com

Toshiba Unveils Their Smallets A3 MFP'

Monochrome Multifunction Printers for the SMEs of 2016

TOSHIBA TEC has unveiled its two models of the innovative and Toshiba's smallest A3 monochrome Multifunction Printers (MFPs) in Malaysia. Introducing the e-STUDIO2802A and e-STUDIO2309A series which are set to drive greater convenience and cost-efficiency to smaller business and workgroups.

Mr Isao Sugehara, Chief Marketing Executive of Toshiba TEC Corporation says "In the office, most of the demand is only A4 printing. However, customers would still think that they need A3 capable MFP's. These innovative products can satisfy that requirement, and by launching this product, we want to obtain 18% market share in 2016."

It's small yet big, with a body that looks like it can only print A4, but is able to churn out A3 prints by using a built-in stack feed bypass, and also enables A3 paper scanning with its built-in Reversing Automatic Document Feeder (RADF). What's more, users can now expect very fast turnaround print jobs, as the FCOT (First Copy Time) is an amazing 6.4 seconds together with an impressive reliable print speed of 28ppm (Pages Per Minute). These outstanding features such as colour scanning, super sharp resolutions, and office ready features such as networking and security functions are also conveniently available.

In addition, the incredibly compact e-STUDIO2802A has a body that can easily be tucked into tight corners and spaces, making it an ideal MFP for small offices. What makes this even more of a must have device, is its energy-saving features. Toshiba TEC's latest offerings are aligned with its commitment to the environment, and e-STUDIO2802A series meets the major environmental programs and standards, such as International ENERGY STAR Program and EPEAT's Silver Rate. Additionally, the Toshiba e-STUDIO2802A series is certified as Toshiba's 'Excellent ECPs (Environmentally Conscious Product)".

Excellent ECPs is Toshiba group's internal certification, but is awarded only to products which achieve the highest level of environment performance in the industry in terms of major functions, at the time of release. The sister models of the e-STUDIO2802A are the e-STUDIO2309A and e-STUDIO2809A. These new models are remarkable monochrome MFPs from Toshiba that will bring great quality and efficiency to SMEs in Malaysia.

www.toshibatec.com.my

Celcom Enhances Music Experience With Yonder

Celcom provides free and easy way to enjoy online music streaming with Yonder

Yonder Music, a music streaming service that offers millions of songs subscription-free has recently entered an agreement with Celcom, where the telco's customers will not be charged for data consumption when using the service on their devices.

Celcom is looking to leverage on this deal even further by starting 2016 off with a bang, by announcing that local singing sensation, Yuna will be performing at the Blue Cube in Sunway Pyramid on the 2nd of January 2016.

Yuna will take stage at Blue Cube @ Sunway Pyramid at 2pm, and will be performing three of her favourite songs, followed by a special meet and greet session exclusively for 20 selected FIRSTTM by Celcom customers.

Similar events were also held by Celcom throughout the country, where legendary singer and composer Man Bai performed live at the Blue Cube in Suria Mall, Kota Kinabalu and Hafiz Hamidun belted tunes at Blue Cube in KB Mall, Kota Bharu, Kelantan earlier in December.

Celcom has also hinted at a special one-day offer when customers visit the Blue Cube at Sunway Pyramid on the 2nd of January, so don't miss out!
www.celcom.com.my

For The Gamers

MSI opens first gaming concept store in Malaysia

MSI, a brand that is surely familiar with many gamers and PC enthusiasts has recently opened its first gaming concept store here in Malaysia. Specifically, the store is in Low Yat Plaza, Malaysia's number one destination when it comes to buying electronic devices, components and accessories.

The MSI store is the first of its kind outside of Taiwan, with the focus of the concept store skewed towards gamers who are looking for a complete system to game with. At the moment, these include MSI's extensive line of gaming notebooks, as well as laptops that are meant for designers who require more than the requisite horsepower to create concepts and render high-resolution 3D modelling work.

MSI has decided to open a gaming concept store here in Kuala Lumpur as a testament to its aim of expanding its presence here in Malaysia, where the gaming enthusiast market continues to grow, providing them with a platform to which easily pick and choose which notebooks suit their budget and needs.

At the store, not only do gamers get to test out the latest MSI gaming notebooks, they can also try out a triple monitor setup and play a variety of games such as F1, Assassin's Creed and more. If they need accessories to go with their newly purchased machines, the store also stocks a variety of Steel Series accessories, such as mice, keyboards, headsets and mousepads.
http://my.msi.com

Blackberry Tries To Make A Comeback

BlackBerry's fighting for survival with Android and a business phone – Is it working?

BlackBerry doesn't want to end up like Nokia, failing hard because it held onto its self-built smartphone operating system for too long. On the other hand, BlackBerry has installed Android for the first time on its new Priv slider phone. This gives the business mobile phone access to the large world of Android apps, as well as the many entertainment options associated with the Google Play Store. Nevertheless, the Priv is tailor-made for business clients. This begins with the hardware keypad, which is accommodated in a classical slider under the 5.4-inch display. The kit also includes a USB port and diverse security features, such as a bootloader that is allegedly 'unbreakable' and an app that always tells the user which applications are gathering what data. BlackBerry aims to combine the popular Android world with its own strengths, namely, productivity and security.

With respect to its design, the Priv has features found in some of its competitors. For one, the display has QHD resolution and is curved at the edges like the Galaxy S6 Edge, though it doesn't have the same functionalities. The rear camera produces excellent 18-megapixel images, but there is no camera on the front side, on account of the slider.

Furthermore, despite the 3410 mAh battery, our test showed that it doesn't hold out as long as we thought it would. Nevertheless, users can surf the internet for almost seven hours. With a price tag of 780 euros (RM3,559 locally), the Priv isn't exactly a bargain deal; with regard to its price, it's in the same range as the Galaxy S6 Edge (it's cheaper locally at RM3,099). However, BlackBerry could be vindicated by the success of its endeavour. According to information provided by the manufacturer, the device has been pre-ordered so many times in the USA that warehouses are already empty.

Europol Wants To Monitor The Internet

Europol wants to create an internet monitoring unit, which will help the European police agency investigate IP addresses. As a test case, the agency is pointing at a Facebook account that is being used to disseminate terrorist propaganda. Europol wants to compare the used IP addresses with user accounts associated with other web services.

AMD Said To Be Ready To Slash Price of Fury R9

A rumour has appeared saying that AMD might be getting ready to drop the price of its Fiji-based Radeon R9 card – the Fury R9. This is deem to be beneficial to regaining market share for AMD in preparation for the launch of its 14nm-based Polaris GPU in Q2 this year. The new pricing has not been announced yet, but considering that the Fury Nano itself has recently gotten a price cut from USD 649 (approx. RM2,758) to USD499 (approx. RM2,121), the USD549 (approx. RM2,333) could also be slashed to somewhere in the region of USD399 (approx. RM1,695). Regardless, the launch of the AMD Polaris graphics processors is bound to warrant an overall reduction in prices for GPUs in the previous generation.

Apple Music Can Now Be Played On Android

Apple is making the jump to Android by offering its Music streaming service in the Play Store, initially as a beta version. Apart from an iOS relocation app, Apple's presence in Android is quite the novelty. However, the conditions for its use are the same on the Android version. You can test Apple Music for free for a period of three months, but after that it will cost 9.99 euros per month. Apple Music currently has about 6.5 million users – But 1.4 billion potential customers are waiting in the world of Android.

Apple Plans Money Transfers Via iPhones

According to the Wall Street Journal, Apple is planning to upgrade its Apple Pay payment service for individuals. The plan is to make it possible to transfer money from an iPhone to another via NFC. Apple filed the corresponding patent at the beginning of the year, and the company is currently in discussions with US banks regarding how the money transfer operation could be executed. Apple Pay is currently available only in the USA and the UK, but is expected to be launched in other countries in a few months. Apple has not yet confirmed whether Germany is to be a member of this group.

Facebook's Manager Sued

Over the course of investigations associated with hate posts, Facebook's European CFO Shane Crehan and two of his colleagues at Facebook Europe have gotten into trouble. The Hamburg prosecution office is now determining whether the three are responsible for hate posts that emerged on Facebook during the debate over refugees. The allegation is that the three of them did not delete legally relevant user posts. This practice of Facebook has been criticised in the past, but the company has never been prosecuted because of it. The previous rulings were directed solely against the writers.

ARM Unveils Processor For Wearables

In the future, ARM wants to equip wearables with the Cortex-A35. The energy-saving processor consumes about thirty percent less energy than the latest mobile CPUs, and it's about 25 percent smaller, even though it's just as powerful. Along with wearables, it's also supposed to power smartphones. The advantage of the mobile CPU is that device manufacturers can individually configure the A35, from the number of cores to any special functions. The first partner of ARM is the Taiwanese tablet and smartphone manufacturer MediaTek. It is not yet known when A35 devices will be available in Germany.

OneDrive Limits Memory

Previously, users of Microsoft's Online-Office 365 had an unlimited amount of space on OneDrive. This is going to change in 2016. The maximum storage space will now be limited to one terabyte, even for Office 365 subscribers. This decision was made because some users exploited the flat rate to such an extent that up to 75 TB of data was present in their folders. The users thus used the facility to secure the back-ups of multiple computers. However, the average user – who uses about 5 GB – will not be affected by the new restriction. In order to remove power-users from the cloud storage service, Microsoft is also cancelling the 100 GB and 200 GB storage packets for non-subscribers. In the future, users will receive additional storage with a maximum of 50 GB for a monthly fee of 1.99 dollars (approx. RM8.74). Those who want more cloud storage will have to get an Office 365 subscription. This does not apply to users who already have one of the larger packages. For free-users, the storage space will shrink from 15 to 5 GB beginning from January. However, this change will only affect existing customers at the end of next year, so that they will be able to secure their extra data. The change has provoked a lot of criticism, because it's not really that surprising that people would want to exploit the unlimited storage.

Amazon Delivers On The Same Day

Amazon has launched its 'Same Day Delivery' service in 14 German cities. Customers living in Berlin or Munich who place an order in the morning will now receive their goods between 1800 and 2100 hours in the evening. The service is free for Prime customers for order values of 20 euros (approx. RM 95) or more, while other customers will have to pay an extra ten euros for this express delivery. However, the quick delivery depends on whether the product in question is available at the local logistics centre. DHL and courier services will be handling the delivery operations, and it was targeted at the Christmas sales at the end of last year.

Autumn Update For Windows

Mobile, Xbox, Skylake: Microsoft is making its operating system available for multiple platforms

Four months after its launch, Windows 10 is getting its first big update. Thanks to the 'Threshold 2' service pack, Skype and Cortana will be integrated more firmly into the desktop version. For example, the speech assistant can now browse through PDFs, and use the desktop to send SMS messages through a Windows phone. The Edge browser still has no add-ons, but it can stream videos to a TV using DLNA and Miracast. Furthermore, Microsoft is hoping to use its autumn update to make Windows 10 significantly faster. The system is now supposedly 30 percent faster when it's starting up. The benefit is even more significant for those who own a device that uses Intel's Skylake CPU, because Windows 10 is the first OS to support the speed shift function. Windows now lets the CPU decide which clock frequency is to be used for the execution of individual tasks (see page 96). According to the initial benchmarks, this results in a 50 percent improvement in response times – along with a slightly lower energy consumption level. Mobile devices, in particular, would get a longer battery service life. Microsoft will probably release the first updates for Windows 10 Mobiles before Christmas. In any event, the top-level Lumia 950 and 950 XL mobile phones are sure to receive the new update. Apart from that, all Windows 8 devices with an internal memory of at least 8 GB are expected to get an update. This would apply to Lumia 640 XL, Lumia 735 and Lumia 930. On the other hand, Windows 10 has already been rolled out to the Xbox One, under the name 'New Xbox Experience'. The gaming console is now backward-compatible with Xbox 360. In addition, Microsoft has significantly improved the networking of the community for individual games.

Sony Buries The Betamax Cassette

40 years ago, the Betamax cassette was the biggest challenger to VHS in the battle of video formats. Betamax lost the war, but it continued to exist until very recently. However, Sony is finally going to end its production run in 2016. Ironically, Betamax will have lasted longer than VHS, which saw its production end in the summer of 2015. Betamax was launched before VHS at the end of the 1970s, but it had already fallen far behind by 1984. On the other hand, VHS found great success in the home entertainment domain – primarily because the cassettes were inexpensive. This particular era of technology will finally come to an end in March.

HTC Overreaches With The A9

HTC's new flagship smartphone is the A9, and it's one of the first mobile phones to be equipped with Android 6.0. In the CHIP test, the A9 achieved scores that were above average, but not extraordinary. The 5-inch full-HD display is somewhat darker than the competitors' displays and the internal memory only has a capacity of 16 GB, though it can be expanded by 200 GB with the help of an SD card. However, the camera is quite impressive – 13-megapixels with manual white balance and ISO adjustments, plus it can save images as RAW files (but this requires an SD card). Unfortunately, there is no 4K video mode, but the device does possess a hyperlapse feature, which makes time lapse shooting possible even when the camera is moving at a high speed. The mobile phone is very well-designed, with a fingerprint sensor that doubles as the home button. The A9 would have been a veritable mid-range smartphone, if HTC had not demanded a price of about 580 euros (approx. RM 2,758). There are better alternatives at this price range, such as the Samsung Galaxy S6 Edge or the Sony Xperia Z5. Perhaps a better price-performance ratio will be found in the X9, which has had its specs publicised by TEENA, the Chinese approval body. It is a mid-range device featuring a 5.5-inch display, but only a quad-core CPU. It also does not have a fingerprint sensor.

NVIDIA Will Announce HBM2-based Titan X Successor In April

The PC master race is about to get hot again as NVIDIA is said to be preparing to show a new high-end graphics processor at its GPU Conference in April this year. It is believed that the GPU intended for unveil will be NVIDIA's new flagship GPU, ostensibly called Titan X2, which will be the roadblock to AMD's road back to prominence. The new GPU will likely feature HBM2 and possibly have 32GB of VRAM and 1TB/s of memory bandwidth.

First Blu-rays With 4K Films In 2016

Sony has announced that the first blu-rays containing films in the ultra-HD or 4K format will be released in 2016. They will go on sale from the beginning of January in the USA, and will be launched in Germany in spring. The first films in the 4K format will be 'The Amazing Spider-Man 2', 'Salt', 'Hancock' and 'The Smurfs 2'. For the American market, Sony is also converting a few classics into the 4K format, but legal considerations will probably prevent these titles from being released in Germany. 20th Century Fox has also announced 4K blu-rays, which will include movies such as 'Kingsman' and 'Life of Pi'.

Qualcomm Snapdragon 830 Will Be Based On 10nm Process

Due to the disappointing market performance of the Snapdragon 810, Qualcomm is working hard to produce a new System on Chip that will improve the company's fortunes when it launches. According to a leak, the soon-to-be Snapdragon 830 will be a direct successor to the Snapdragon 820 which is due on the market soon. It will be based on a 10nm manufacturing process and will support up to 8GB of RAM.

Picture-In-Picture Mode On iPad Now Possible

For those who are looking for a solution that can provide picture-in-picture mode for their iPad, your days of searching are over. There is a new app on the App Store that can give you the experience you want, so now you don't have to use those clunky workarounds. It's called CornerTube.

CornerTube has a few features. For one, you could have a video you were watching float around as you work on a document, something that many people have been clamoring for. Another is Today Widget, which detects any YouTube links in your clipboard and makes it a simple tap away from your Notification Center. There's also Action Extension, a feature that allows you to watch YouTube from other apps by tapping and holding on a YouTube link and then selecting 'Open in CornerTube". In addition, there's Split View multitasking and In-app Search.

Good things don't come for free and due to these great features provided, CornerTube will require you to part ways with USD1.99 (approx. RM8) to download and use it. CornerTube can be downloaded at https://itunes.apple.com/us/app/cornertube-pip-player-for/id1073199994.

Also work in Split View multitasking!
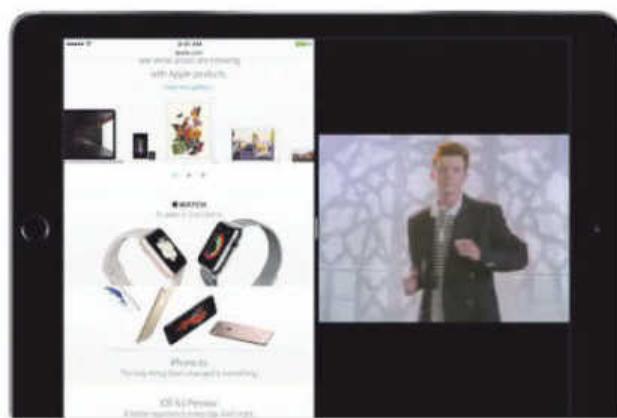
Images Are The New Virus-catapults

Hackers can use steganography to hide malicious code in JPEG image files. Users are able to protect themselves only to a limited degree

At the Black Hat hacker fair in Amsterdam, security researcher Saumil Shah demonstrated how one can hide an exploit code in an image. This makes it possible to circumvent all security warnings issued by browsers. To pull this off, Shah used steganography, which is a well-known technique through which tools can code programme code or files into an existing image without changing the image in a noticeable way. The file's extension and header also remain the same. However, the security expert went one step further. Normally, a steganography tool that serves as a decoder must be present on the computer, so that the code can be read out from the image.

Shah used a trick to integrate a Javascript-based decoder into the image, which even forensics experts find difficult to detect. Anti-virus programmes are completely overwhelmed by it, as none of the latest programmes flag Saumil Shah's

At Black Hat Europe, Saumil Shah presented a method of hiding malware in normal JPG images

procedure as a threat. When a user views the manipulated image in the browser, the malicious code infects his computer, running the integrated Javascript in the background.

According to Shah, the issue of whether the actual malicious code will be detected by anti-virus systems depends on the individual case in question. His goal was to demonstrate that the code can get past all kinds of tests to reach a computer. Users would only be able to protect themselves against such an attack by using programmes such as NoScript, which will prevent the execution of Javascripts. However, browser updates by the manufacturers would be more important. The programmes have so far been executing every single piece of code – even if it's hidden within an image.

Data Theft Of The Month

VIENNA MASS TRANSIT: PASSENGER DATA GONE

The online shop of Vienna's public transport system (the Wiener-Linien online shop) had to own up to a theft of data. According to the shop, names, postal addresses, e-mail addresses, birth dates, customer numbers and telephone numbers were stolen. Payment data was not affected. The data was stored with a service provider, whose systems were penetrated by the attackers.

ADAC: 19 MILLION DATA SETS ON THE WEB

The automobile club accidentally made private data available online. The loophole was discovered by FDP member Tobias Huch. According to Mr Huch, he used a form that allowed members to order an ADAC credit card to access 19 million sets of customer data. According to an ADAC spokesperson, the loophole has existed since the beginning of October: When a random membership number was entered, the respective name, date of entry and type of membership could be viewed for a few seconds.

TOUCHNOTE: CUSTOMER DATA STOLEN

The web-based Touchnote photo service has fallen victim to a data theft. Attackers managed to infiltrate the servers and read out customer data, including names, e-mail addresses, birth dates, postal addresses and ordering histories. Touchnote customers should change their passwords as quickly as possible.

Android Patches Not Made Available Fast Enough

23 vulnerabilities were rectified in a new Android security update. The updates are carried out on a monthly basis, but they are only available immediately for Nexus devices. Samsung soon plans to supply the patches to parts of its product range. As for other manufacturers, it could take months for the fixes to find their way into the firmware of the corresponding devices. ◨

Microsoft Delivers A Fix For An Update

The security updates for Windows that were released on the November patch day led to frustration and system errors. The Microsoft forum indicates that the KB3097877 update is the root of the problems. These problems include errors associated with the network login and a disappearing sidebar. Microsoft has now released a new version of the update in question. ◨

Banking App Of The Savings Bank Permits Manipulation

Vincent Haupert and Tilo Müller of the Friedrich-Alexander University Erlangen-Nuremberg have uncovered vulnerabilities in the savings bank app. For example, they managed to raise a transaction sum of 0.10 euro (RM0.47) to 13.37 euros (RM63.14), and change the recipient. The savings bank declared that the two hackers merely hacked an older version of the app, and that the latest version is secure. However, the experts are convinced that the new versions of the app are just as vulnerable. ◨

Danger Barometer

There is now a method to spread malware via JPEG. When a user views a compromised image in the browser, a Javascript-based code is executed and infects the computer. Antivirus programmes are currently unable to detect this new method
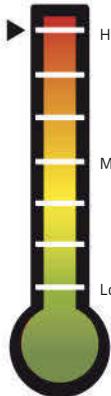
High risk

Medium risk

Low risk

Where are mobile phones (un)safe?

Kaspersky carried out a study to identify the countries in which the population is more likely to fall prey to mobile malware attacks. Japan doesn't have to deal with mobile risks to a large degree, but China has a high percentage of chance in being affected.

CHINA	21 %
IRAN	14 %
SCHWEDEN	3 %
JAPAN	1 %
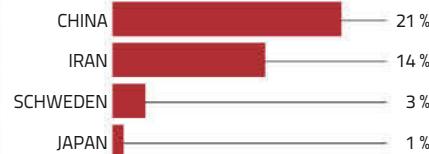
SOURCE: KASPERSKY

Danger for online bank account

Compared to the previous quarter, this quarter saw the appearance of 2,516 new Banking trojans. The total number of known banking viruses (currently 22,909) is rising steadily.

Anzahl mobile Malware

Q4 2014	Q1 2015	Q2 2015	Q3 2015
18.236	19.763	20.393	22.909
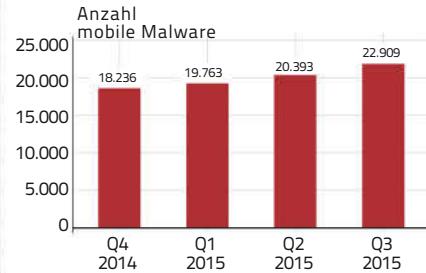
SOURCE: KASPERSKY

Number of the Month: **19,000,000**

A loophole in Allgemeiner Deutscher Automobil-Club's (ADAC) system left 19 million sets of customer data exposed on the internet.
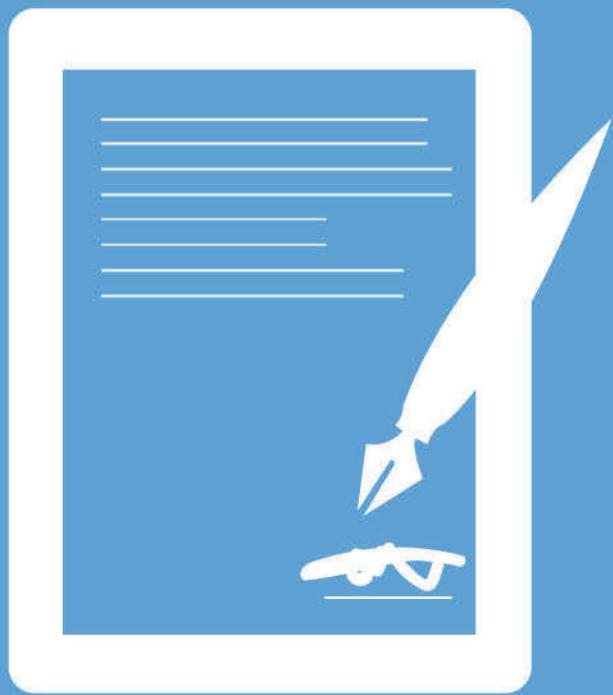
E-Signature

With online transactions becoming the norm these days, e-signatures are the way to go in the near future

By Edwin Lee Yong Cieh

Professor Chris Reed in his article "What is a Signature?" states that the principal function of a signature is to provide evidence of three matters: (i) the identity of the signatory; (ii) the intention to make a signature to indicate agreement and willingness to be bound by the contents of the document; and (iii) that the signatory adopts the contents. In other words, the signature demonstrates that the signatory had the intention to authenticate the document, which serves as a form of evidence in the event of a dispute.

Generally, many people still prefer to sign on a printed form of contract. While this approach is widely adopted, it comes with several risks and challenges. How does the recipient know the signature is not forged? How does the signatory know that his signature is linked with the contract or that the contract that he agreed is the contract he "signed"? It is a recognized fact that physical documents can be easily altered and signatures can be forged.

With the advancement of technology and wide availability of online E-Signature services, it is therefore a high time for us to examine an alternative form of signing via electronic means, known as "E-Signature". Since contracts can be prepared electronically, it is only natural that signing should also take place electronically.

Types of E-Signature

Since a traditional handwritten signature is not possible on an electronic contract, people have used several different methods to indicate their E-Signatures, including:

- typing the signatory's name or a placing a unique representation of mark into the signature area;
- scanning a physical manuscript signature;
- pasting a scanned version/image file of the signatory's signature into the signature area;
- signing with a special pen on a pad which is used to measure and record the actions of the person as he signs;
- clicking on a website button/ticking off a tick box to this effect (for e.g. "I Agree", 'I Accept", "Confirm Order");
- inserting an E-Signature via an online E-Signature service;
- attaching a digital signature created by cryptographic means whereby the sender affixed the signature using his private key and the recipient checks the signature using his public key (more commonly known as "digital signature").

I would not recommend the first 3 methods as they provide very little security against forgery and misuse, and they are more vulnerable to identity theft if the communication is intercepted.

Legal Status of E-Signature

The issue is whether E-Signature is legally recognised under the law. In 1996, the United Nations published the UNCITRAL Model Law on Electronic Commerce which was highly influential in the development of E-Signature around the world. It was the first model

law that sets forth the principle of non-discrimination in order to ensure that a document is not denied legal effect, validity or enforceability solely on the grounds that it is in electronic form. Subsequent to this, the UN further published UNCITRAL Model Law on Electronic Signatures (2001) and the United Nations Convention on the Use of Electronic Communications in International Contracts (2005) to affirm the notion that electronic contracts and electronic signatures are as valid and enforceable as their paper-based equivalents. As a result of this, many countries around the world have enacted their own legislation to give effect to the validity and enforceability of electronic contracts and electronic signatures.

In Malaysia, the Electronic Commerce Act 2006 ("Act") recognises "any letter, character, number, sound or symbol or any combination thereof created in electronic form adopted by a person as a signature" as an E-Signature. The Act also states that if the document is created electronically, it can now be signed by an E-Signature. This is of course subject to the conditions that the E-Signature has to be attached to or is associated with the electronic document, adequately identify the person and adequately indicate the person's approval of the contents in the electronic document and be reliable.

Reliability of an E-Signature is established when the means of creating the E-Signature is linked to and under the control of that person only and as long as any alteration made to the E-Signature or to that document after the time of signing is detectable.

Under Malaysian law, a handwritten signature is not necessarily required for a valid contract. Contracts are generally valid if parties have reached an agreement and intend to be bound by the agreement, whether they agree verbally, electronically or in writing. The Act specifically confirms that contracts cannot be denied enforceability merely because they are concluded electronically, although certain documents and deeds may require additional formal requirements such as notarisation or attestation (for example, power of attorney, wills and codicils, trust documents, negotiable instruments, real property transfers, statutory declarations, bills of sale, etc). The principles behind the use of signatures have not changed, what the law does is to facilitate paperless signing via electronic means.

Why Use E-Signature Service?

Using E-Signature service in high value or important transactions can provide the level of assurance needed, build trust in the underlying system as well as improve overall customer satisfaction as the documents are more securely held and the signing process is carried out more efficiently.

A good quality E-Signature service can offer the following features:
- Signature authentication
Anyone who signs a document via an E-Signature service must have a log-in information or have received in his email account a request for signature, so that you know exactly the identity of the person who signs your document.
- Signature affixation
Each signature on a contract is imposed and affixed to the contract. There is an audit trail that tracks who has opened, viewed and signed the document and when. The audit trail is appended to all signed documents and forms a court-admissible document log.

- signature integrity
The service allows any changes to the contents to be detected more easily, showing whether the contents have been altered/tampered during and after the signing process and ensuring that the contents remain confidential and secure.
- Court-admissible transactions log
The service creates a comprehensive transaction log that shows the detailed transaction history, track and timestamp various information from the moment the document is submitted for signature to when it is completely signed and secured, thus creating a full action list and document history that are more likely to pass the evidence admissibility threshold.
- Secure records retention system
Information transmitted is encrypted (preferably using SSL, 256-bit encryption) and stored on secure servers in multiple data centers, hence keeping the documents private and secure and easy to retrieve and the whole process, from signing, completion to storage is carried out electronically, resulting in time and costs savings in terms of internal administration and record keeping.

Conclusion

E-Signatures are increasingly used in e-commerce and in regulatory filings. Many businesses, individuals and governments now conduct transactions over the Internet. E-Commerce aside, most of you would be familiar with the annual tax filings conducted entirely over the Internet. You can also renew road tax and pay summons over the Internet. All these dealings between the Government of Malaysia and the public are legally recognised under the Electronic Government Activities Act 2007.

The E-Signature technology is still developing and you should carefully choose the right service that offers some, if not, all the features mentioned above. It is believed that secure method of E-Signature will become a commonplace in the near future, as we slowly transition to a paperless world.

The view expressed in this article is intended to provide a general guide to the subject matter and does not constitute professional legal advice. You are advised to seek proper legal advice for your specific situation.

International CES®

CES 2016

The biggest electronics trade show in the world came and left, with companies showcasing what users can look forward to in 2016   By Team CHIP

The Consumer Electronics Expo, or CES, as it is more widely known, is always a great event to look forward to for tech enthusiasts, consumers and businesses alike. The event sets the pace for what everyone can look forward to in 2016, and in some cases, products that people have already been looking forward to since last year. In this article, we take a look at some of our favourite tech at CES 2016.

MSI 27XT AIO

All-in-one computers have been gaining some pretty decent traction as of late, thanks to Intel's 6th generation Core processors that allows manufacturers to go crazy with chassis designs and such. MSI's first entry in the gaming desktop department is the 27XT AIO PC, which not only houses a requisite Intel Core i7-6700 processor, but also two NVMe SSDs hooked in a RAID 0 configuration for blazing fast performance.

That's not all of course, as MSI has also included a special slot at the back of the 27XT for a full-sized GPU, which connects to the AIO via a PCIe extension cable. Unfortunately however, the 27TX is a pricey beast, with a retail price of USD1,700 with no GPU included, which you will have to source on your own. For now, only a single card solution is available, although we wouldn't put it past MSI to add an extra slot in future iterations of this machine.

ASUS ROG GT51

The ASUS ROG line has never been known to shy away from being as aggressive-looking as possible, and with the ASUS ROG GT51 gaming desktop PC, the Taiwanese PC hardware giants are looking to assert their dominance in this space by adding more features that we didn't even know we wanted.

This beast is powered by an Intel Core i7-6700K processor, and a choice of up to two NVIDIA GTX Titan X graphics cards, which is cooled down by the help of a front-facing air-vent that pulls in air directly over the two GPUs. God-like performance isn't the only thing to look forward to, as the GT51 desktop also comes with an NFC bracelet called ROG Band which grants you access to what ASUS calls Shadow Drive, a hidden partition accessible only with the bracelet, and some auto overclocking features.

Lenovo IdeaCentre Y900 Razer Edition

Collaborations between PC manufacturers and gaming accessories companies aren't exactly new, but this is quite possibly the first time the two have come together to bring us something that's out of this world. Introducing the Lenovo IdeaCentre Y900 Razer Edition (RE), a collaborative effort between you guessed it, Lenovo and Razer that's set to turn heads.

Sporting an Intel Core i7-6700K processor, this green giant of a gaming PC also sports two NVIDIA GTX 970 GPUs in SLI configuration, perfect for gamers who are looking for a stylish-looking gaming workhorse. Speaking of stylish, Razer added their own creative input into this machine, as the company is known for its sleek gaming accessories. On top of that, the IdeaCentre Y900 RE also comes with a Razer Chroma keyboard and mouse, while the PC also sports the Chroma colour scheme, making it stand out even in a crowded room filled with other PCs.

Laptops

MSI GT72S Tobii

MSI's GT72 notebook isn't exactly the newest machine on the block, but the company has seen fit to deck it with a few brand new components and accessories to refresh it to put it up against today's PC gaming beasts.

First off, the new and improved GT72 sports Intel's new sixth generation Intel Core i7 processor, a beastly amount of RAM at 32GBs, as well as 256GBs and 2TBs of primary and secondary storage in the form of an SSD and HDD. To take care of the GPU side of the business, the GT72S sports an NVIDIA GTX 980M graphics card.

The most impressive feature on this machine however, believe it or not comes in the form of the Tobii infrared eye-scanner, which is integrated into the laptop's hinge. This allows you to not only use Windows 10's Hello function, but also allow you to control your characters in-game using only your eyes.

ASUS ROG GX700

Water-cooled laptops are a thing these days, and ASUS is jumping in hard on that bandwagon. Introducing the ASUS ROG GX700, ASUS' first ever water-cooled laptop, which comes with a detachable water-cooling loop ASUS has called the Hydro Overclocking System.

While it is probably one of the most gaudy laptops we've seen in a while, the GX700 is almost literally a desktop in the form factor of a desktop-replacement machine. It sports the latest Intel Core i7-6700K and comes with a full-sized NVIDIA GTX980 graphics card, which explains the need for a huge cooler like the Hydro Overclocking System.

GIGABYTE P34W

Powerful yet portable, the GIGABYTE P34W is the brand's thinnest 14" gaming laptop. It sports a QHD 2560x1440 display that delivers perfect and vivid colors for an enhanced gameplay experience. Under the hood, the P34W is powered by the latest 6th Gen Intel Core i7 processor as well as the powerful GTX 970M graphics, all contained in an Ultrabook-like chassis. The dual-storage design enables the P34 to hold up to 512GB M.2 PCIe SSD plus a 2TB HDD in total. Included in the P34W is a 3-month premium license of XSplit Gamecaster, which allows gamers to stream games like a pro.

Lenovo Yoga 900S

Lenovo has constantly amazed and wow us with how creatively they design their notebooks, laptops and convertibles. The Lenovo Yoga 900S is no exception to this, as it is a marvel of engineering no matter how you look at it.

Closed, it measures in at just 0.5 inch in thickness, and comes with a 12.5 inch display with a qHD resolution of 2,560x1440 pixels. The Yoga 900S is powered by an Intel Core m7 processor, 8GBs of RAM and 512GBs of SSD space, which does not make it a slouch despite its small size. Not only that, Lenovo has also managed to fit in three USB 3.0 ports into the machine, including a USB Type-C port for faster power draw and data transfer rates.

Virtual Realitya Reality
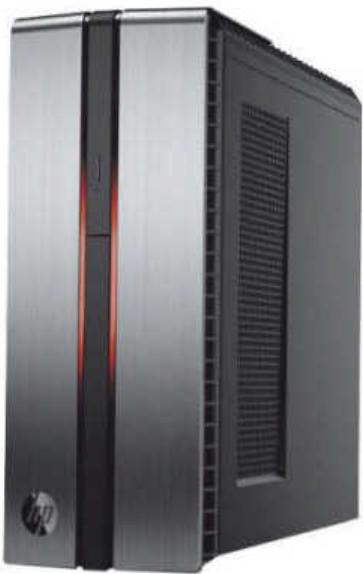
HP Envy Phoenix

Oculus has recently unveiled the PC specs needed to run one of its own Oculus Rift virtual reality headsets, but HP has gone one step further by working together with HTC and Valve to ensure that they have a machine that is capable of running any virtual reality headset thrown at it. The HP Envy Phoenix is what you're looking at.

This tower PC is powered by an Intel Core i7-6700K processor, features a 2TB HDD and a choice of either an AMD R9 390X, NVIDIA's GTX 980 or 980Ti graphics card. There's not much else to say about this PC at it doesn't really come with any other gimmicks either, although you can be rest assured that HP will ensure that the machine runs any virtual reality headset thrown at it with minimal issues.

Oculus Rift

The Oculus Rift has finally gone gold, with preorders closing as fast as it opened. The Rift, which originally started out as a Kickstarter project, has been under a lot of scrutiny, as Oculus launched a number of iterations of the product, with the latest pre-production model named DK2. At CES this year, Oculus unveiled that the Rift will be launching in July this year for a eyebrow-raising price of USD599. The preorder includes the headset, sensors, remote, cables, an Xbox One controller, as well as a copy of EVE: Valkyrie and Lucky's Tale. Before buying one though, we highly recommend that you also check if your PC is Oculus-ready. The specs needed to run it can be surprisingly high-end.

Razer OSVR

Virtual reality hasn't really gone mainstream yet, but there is already movement in the tech industry to make VR open source. Enter Razer, as they introduced the Razer OSVR (Open Sourced Virtual Reality) headset. OSVR is an ecosystem designed from the ground up to set an open standard for Virtual Reality input devices, games and output with the sole goal of providing the best possible game experience in the Virtual Reality space.

The device is available for developers who are looking to tap into the VR space, but don't necessarily have the budget to go for either a Vive or an Oculus Rift. It is expected that many more will begin to embrace open source technology for virtual reality, and it's great to see Razer spearhead this movement.

Wearables

Fitbit Blaze

Jump into Fitbit's latest smart wearable The Blaze, making its grand appearance in CES 2016 for all to see. This time round Fitbit has included some breakthrough features such as the PurePulse Heart Rate which accurately tracks calorie burn, helps maintain the intensity of your workout, maximising your training and optimising your health. Then there is On-Screen Workouts to get step-by-step instructions to a workout all on your wrist, and a Connected GPS to map your routes and gathering stats. Best of all it has a 5-day battery life despite having a colour touchscreen.

Under Armour HealthBox

The Under Armour HealthBox is not just a simple wearable, but actually a set of devices that will help you track your fitness more than ever. It consists of the UA Band which measures your sleep, resting heart rate, steps, and workout intensity. Then there is the UA Scale that tracks your body weight, body fat percentage, and progress towards your weight goal, not to mention the power to recognise up to 8 different users. Then to complete the set there is the UA Heart Rate, a chest strap for tracking heart rates while you work out, see it in real-time when **paired with your UA Band.**

Garmin Varia Vision

This one is for the adventurers who cycle a lot. The Garmin Varia Vision enhances your road awareness by putting cycling information right in front of your eyes. Reminiscent of a future sci-fi device only seen in movies, the lightweight display attaches to either side of a pair of sunglasses and relays information directly from your compatible device. Now you can stay focused while trying to nail your targets during a workout, while finding the next turn or staying aware of cars approaching from behind. It also provides vibration alerts for key performance, direction, radar and call/text prompts.

Livall Bling Helmet

What is a Livall Bling Helmet you ask? The Livall Bling Helmet is a 'smart" helmet that sports a built-in Windbreak microphone, 3-axis G-sensor, Bluetooth speaker and LEDs on the top and back of the helmet. Stay connected when cycling with the Bluetooth speaker and Windbreak mic, receiving calls can now be done hands-free and with your eyes kept on the road. The speakers and mic can also act as a walkie-talkie with other users of the helmet. Furthermore, text messages can be sent through the Livall Riding App and will be automatically converted into voice messages for riders in riding mode.

Smartphones

Yezz Sfera

Yezz Sfera will definitely catch the "eye" of selfies lovers all over the world for sure, sporting a 260 degree HD fisheye camera with special lenses to create amazing pictures. Imagine taking photos of an entire 360 landscape in single photo. With its TouchPlay feature you can navigate images and videos horizontally and vertically, you're going to be so immersed you'll probably think that your right there when it happened. Additionally, if you have a spare Google Cardboard lying about, with VR Play you can virtually put yourself in the photo giving you a 360 degree virtual reality experience, what more can you ask for.

Huawei Mate 8

Huawei does it again, taking the look and feel of the Mate series to a whole new level. Boasting a 6-inch FHD display and ultra-slim design, together with a sleek aluminium unibody design, the Mate 8 is stunningly gorgeous. It houses a 4,000mAh high-capacity battery that gives you longer call times and staying connected all day, also made possible due to the high efficient Kirin 950 chip with SmartPower technology, setting a new standard for smartphone battery life. Not only that, with a powerful new 16MP Sony sensor and smart camera features such as Optical Image Stabilisation and Huawei's new Image Sensor Processor, the Mate 8 delivers sharpness and clarity in every image.

Kyocera Hydro View

Are you an adventurer that constantly gets yourself into wet situations? Then the Kyocera Hydro View could be the perfect smartphone for you. Not only is it budget friendly, it has a certified IP57 level of elemental toughness and is protected against dust and water getting into the seals. It is protected to the extent that you can dunk it into 1m of water for up to 30 minutes, and not having to worry about it. It comes with a feature called Wet Touchscreen Operation that will ensure that even if there's water on the 5-inch touchscreen, you will have no interference with your taps and swipes.

LeTV Le Max Pro

LeTV is brand not many people know of, but this year round in CES2016 they have joined the fray with many "firsts" for smartphones. First and foremost, the LeTV Max Pro is the first smartphone to feature the SnapDragon 820 chip, Qualcomm's next generation processor. Then there's the ultrasonic Sense ID fingerprint reader, and a multi-Gbps short-range 802.11ad wireless connectivity, not to mention a blazing fast 4GB of LPDDR4 RAM clocked at 1866MHz. The smartphone houses a 6.33-inch display with a high glass-to-body ratio, giving an edge-to-edge look where the side bezels are close to non-existant. If that wasn't enough the LeTV Max Pro comes with a 21MP back camera and a 2.0um camera on the front.

Displays

Dell UltraSharp 30

One of the most impressive displays that appeared in CES this year has to be Dell's UltraSharp 30. This OLED display boasts 4K resolution, a massive 400,000:1 contrast ratio, and a response time of 0.1ms! It doesn't lose out on colour either, as it covers 100% sRGB and AdobeRGB. The coolest thing about it is that the UltraSharp requires only a single USB Type C cable for both power and input.

ASUS ROG Swift PG348Q

ASUS has new monitors for those of the gaming crowd, like the new ROG Swift PG348Q. This monitor has some amazing specs which include Nvidia G-SYNC, 100 Hz refresh rate, 21:9 aspect ratio, and a resolution of 3,440 x 1,440. It also has a button made just for you to quickly switch the refresh rate of the monitor. For those who want an all-in-one solution, this display also has two 2W stereo speakers built-in, so you can also plug your game consoles in and not need external speakers.

Lg's Flexible Screen

There's no name for it yet, but LG's prototype display is a possible glimpse into the future. The 18-inch prototype display can be rolled up like a piece of paper, which allows you to stow it away while not in used. LG has explained that there are obvious technical hurdles to overcome, such as how you to prevent pixels from going dead if you're just more than a little rough with it. Who knows, this might just lead them to a side research in developing self-healing pixels.

Panasonic's Transparent Screen

Transparent screens aren't new, but it's still cool to see them. The latest prototype by Panasonic has a resolution of 1080p and the screen size is about the size of your average living room TV. It has a few interesting features, such as being able to adjust the height of the screen, play music, show notifications, and become translucent and blend into the background. Panasonic hasn't quite achieved full transparency yet, but it'll be exciting to see how this technology continues to unfold.

Televisions

Sony XD93

Sony's TV hurrah at CES 2016 was the XD93 that will come in 55 and 65-inch sizes. It's a new Android TV that will have full HDR support, which means you get to use many of your go-to apps on it. Besides that, some Android games will work on it. It will also be able to run Sony Ultra - a service that will let you buy or stream 4K HDR shows. The only caveat is that it's only limited to those published by Sony Pictures.

LG Super UHD UH9800

The biggest TV announcement in CES 2016 is probably LG's Super UHD UH9800. Not only is it large at 98-inch, it also has a large resolution count being an 8K TV. Although it's not one of the company's famed OLED TVs, this IPS panel comes has high contrast ratios and has support for HDR. It runs on LG's own proprietary webOS 3.0, which are compatible with both Amazon Prime and Netflix.

Panasonic DX900

4K has had a year to build up and this year the trend continues. Panasonic has a new idea, however, and it's called Ultra HD Premium. Ignoring the not-very-original name, UHD Premium panels like Panasonic's DX900 have 10-bit colours, more than 1,000-nits brightness and, once again, HDR support. The Japanese maker says that the DX900 uses a honeycomb-structure local dimming panel, which helps by minimising light leakage.

Samsung KS9500 SUHD

This seems to be the year of HDR support, as Samsung's KS9500 SUHD is another TV that comes with that feature. Samsung's new boy into its TV line-up also uses the Quantum Dot technology so it will also have great colour. Now improved, the Tizen-based Smart Hub's interface is more user-friendly interface and can be customised. On top of that, a Smart Control remote will supposedly allow users to control other devices like game consoles.

Others

CoDrone

Do you love drones and have a passion for coding? Now you can combine your two interests in one with the CoDrone, the world's first programmable drone. By using the coding package that comes with the CoDrone, you can programme it to follow you, or battle other drones in a game of laser tag. It's the first step in creating the ultimate drones, if you ask us. This cool project by Robolink was included in this year's CES Last Gadget Standing and is ready to go to market soon.

iCamPRO Deluxe

It's an eye, it's a light bulb, no it's iCamPRO Deluxe! At first glance, the iCamPRO Deluxe almost looks like a light bulb with an eyeball on it, but in reality it is not just a simple camera. This robotic camera has AI built into it that gives it the ability to recognise faces and alert you when it detects intruders into your home or office. Able to cover 360-degrees, the iCamPRO Deluxe may just be the CCTV replacement you've been looking for.

Segway Robot

Since we're on the topic of robots, here's another that appeared at CES 2016 during Intel's keynote – the Segway Robot. The Segway Robot is both your robotic friend and personal transporter. Built by Ninebot and Segway in partnership with Intel, it is able to navigate its way through crowds, made to follow you, or answer the door for you. The development kit that will be made available is open platform, which opens up any number of possible functions that can be programmed into it.

Polaroid 3D Printer

3D printers are not new, but there's always new tech behind it, and Polaroid's version is pretty interesting. What sets it apart is that Polaroid's 3D Printer looks more user-friendly – it's designed to be simple to use and doesn't drown you in settings. Another advantage is that it can many adjustments on its own without needing the user to do so, so that also helps a lot. Polaroid is hoping to release the product to market this year.

Razer Blade Stealth

Every year, the Consumer Electronics Show presents a multitude of new hardware for us to drool over and this year is no different. This time around, we stared in awe as Razer unveiled the latest addition to its Razer Blade gaming notebook series – the Razer Blade Stealth By CHIP Team

Hidden Power

What's great about Razer's new ultrabook is that it's not just a pretty machine, but also comes with packed with great hardware, such as an Intel Core i7-6500U processor running at a base clockspeed of 2.5GHz, 8 GB of dual-channel DDR3 RAM, PCIe M.2 SSD storage from 128GB up to 512 GB, Wireless AC for fast networking, and lastly the Intel HD Graphics 520 chipset.

The Ultimate Ultrabook

This sleek looking Blade Stealth is an ultraportable, Razer's first in the line at this form factor. It's an ultrabook that you can easily carry in your bag wherever you go. The product's specifications states that its height is 13.1 mm and weighs 1.25 kg, meaning that it's really slim and lightweight. You could probably slip this into your backpack and not even feel it, or easily carry it around in a small carry case.

Razer doesn't skim on build quality either, as the Blade Stealth's chassis is a highly durable aircraft grade aluminium. To complete this ultraportable experience, Razer says that the ultrabook has up to eight hours of battery life.

Sexy Display

The display of the Blade Stealth is top of the line. It's a 12.5-inch IGZO (Indium Gallium Zinc Oxide) touch display, which comes in either Ultra HD (3840 x 2160) or Quad HD (2560 x 1440) resolutions. The UHD variant will have a 100% Adobe RGB colour gamut, a useful feature for those who are design professionals or photographers.

USB Type C

Besides allowing you to connect the Blade Stealth to the Core, the Type-C port also functions as a USB port, DisplayPort, and has the potential to connect to other PCI Express and Thunderbolt devices. This versatility it offers means that Blade Stealth owners can connect to a wide variety of devices that can be developed to work on it.

Razer Core

You may wonder: 'how can I game with just the Intel HD Graphics?" The secret is the Thunderbolt 3 support for the USB Type-C port. It allows the Razer Blade Stealth to be connected to a new external graphics card enclosure – the Razer Core. Razer's intent for the Core is for it to function as a true plug-and-play external GPU, whereby the user can just plug the Blade Stealth to it via the Type-C port and have it instantly switch over to the external GPU for some high-end gaming.

Praveen Thakur, Vice President, Technology Business Unit at Oracle

The Database Business

Oracle is one of the big industry names when it comes to database businesses. Database-as-a-Service is growing day by day, and we take a look at the advantages and challenges in adopting it   By CHIP Team

Could you tell us more about database-as-a-service (DBaaS)? How does it help transform a business?

Businesses today are inundated with tonnes of data that needs to be managed. Data is a treasure trove of information that not only ensures the smooth running of the business, but also provides insights for further growth of the company, and proper data/information management is the driver that sets that transformation in motion.

DBaaS is a paradigm where end users (database administrator, Developers, QA Engineers, Project Leads, etc) can request database services, utilise it for the lifetime of the project, and then have them automatically de-provisioned and returned to the resource pool. This provides organisations with a shared, consolidated platform from which organisations can easily provision database services. It also has elasticity to scale up and scale back database resources, and chargeback based on database usage, thus increasing cost efficiency. DBaaS follows the definition laid down by the National Institute of Standards and Technology (NIST) for cloud computing –Self Service, Rapid Elasticity, Measured Service (metering and chargeback) and Resource Pooling.

Enterprises tody are constantly evolving with hundreds or even thousands of new applications to meet growing business demands. This growth has driven up the cost of acquiring and managing servers and storage in the industry. Initially, we viewed DBaaS primarily as a consolidation exercise for reducing capital expenditures (CAPEX) for our customers, but as it evolved, we realised that other key drivers like self-service, chargeback, and capacity planning facilities proved to be key for businesses to not only reduce costs, but to have the resources and support to enact real business transformations. On-demand access to software and infrastructure in a self-service provision by our Enterprise Manager solution, along with its elastically scalable and metered manner has helped our customers address issues related to the quality of their service and has given them the flexibility to meet the dynamic nature of business workloads.

Last but not least, DBaaS aids the mitigation of security issues. Maintaining each database in a separate container creates a kind of virtual moat, which is an impediment for the bad guys. Security is enabled by default across database environments to avoid the possibility of having the weakest link.

Are organisations in Asia receptive towards DBaaS? What are some of the factors hindering or encouraging them to adopt DBaaS?

The global adoption trend towards cloud and the rising database workloads have created demand for cloud database and DBaaS across industries, such as government agencies, financial services, academic sector, healthcare and life science industry, media and entertainment, professional services, telecom, and manufacturing.

The awareness of the benefits that DBaaS brings to an organisation's foundation and how it simplifies further initiatives is well-received and attractive to both the public and private sector organisations in Asia .

However, the decision to adopt solutions do not lie solely with CIOs or CTOs. It goes through rounds of evaluation with multiple stakeholders. Key business decision makers may not be well-versed with technology and have concerns around security settings, service level agreements, whether the technology is the right fit, the trustworthiness of the solution provider, cost efficiency, ease of use,

and more. These are valid concerns.

These concerns are easily addressed with simplified and integrated solutions that work on an operational expenditure (OPEX) model, securing stakeholder buy-in.

DBaaS offers organizations an opportunity to standardise and optimise on a platform that eliminates the need to deploy, manage and support dedicated database hardware and software for each project's multiple development, testing, production, and failover environments. The architecture is inherently designed for elasticity and resource pooling, delivering production and non-production database services that support average daily workload requirements while scaling-up to handle increased demand and scaling-down when that demand has subsided.

With these benefits, companies are increasingly adopting DBaaS solutions. The DBaaS (OPEX) model enables consumers to avoid large upfront investments in hardware, software and services. This cost structure especially resonates with line of business managers. Not only does the DBaaS model enable more agile database services, it also helps the business to allocate costs. User organizations pay to the degree that they consume each service, incentivising those organizations to be more efficient. They can commission databases for particular purposes, then decommission them and return them back to a resource pool that all organizations share. Charging back for database services can transform the IT environment from a cost center to a revenue generator.

How should an organization know if it is ready to adopt DBaaS?

DBaaS is only interesting when it delivers quantifiable benefits to the business, both internally and externally. To determine the benefits of DBaaS to an organization, consider quantifying the following business requirements:

▪ Business user benefit – DBaaS must be able to benefit the business directly or indirectly. For example, would a business user be able to accomplish their work better, faster or in a more cost-effective manner if DBaaS was available?

▪ Business processes benefit – DBaaS should provide a measurable benefit to business processes such as supply chain management, enterprise resource planning, or human capital management. For example, could DBaaS provide a more agile and optimised foundation to support key business processes that rely on database services?

▪ Contribution to strategic business goals and objectives – DBaaS may support strategic business objectives. For example, a standardised and optimised platform such as DBaaS could help reduce the time required to create, migrate or integrate new applications resulting from acquisitions or new lines of business.

An organization is ready to adopt DBaaS the moment they are ready to address their database management issues.

Could you share some tips on developing a good DBaaS strategy? And what should Asian organisations look for in a DBaaS solution?

For successful adoption and sustainable execution, it is important to understand how DBaaS fits into the overall environment. The greatest value will be reaped when your DBaaS strategy is considered along with the organisation's overall enterprise architecture and IT strategy. Enterprise architecture helps to structure DBaaS projects through a series of overlapping steps, or iterations. A systematic process determines how these

environments should be created, with attention to the business, technical, and operational implications.

For example, if the HR department wants to implement a new payroll service and share it with other departments, the EA team needs to begin by creating use-cases that reflect the needs of each department. They then consider the profiles of the various departments and develop a service catalogue that lists the functions these agencies need. Then each department can provision as little or as much of each service as needed and also specify the degree of availability, disaster recovery, and uptime requirements.

Oracle has developed a complete Database as a Service Reference Architecture that consists of artefacts, tools and samples that help companies understand how to operationalise DBaaS with attention to the correct strategy, people, processes, and technology.

Within Asia, organisations are generally very process-oriented. This is a good starting point to embark on a DBaaS solution. DBaaS comes in to further simplify processes and to add 'oil" to the 'gears/processes" of the organisation to improve workflow efficiency and boost business productivity.

According to an Imperva report, DBaaS could be used by hackers to compromise an organisation's database without accessing its network, thus increasing the risk of a data breach. What are your thoughts on this? And how could organisations using DBaaS solutions reduce the risk of this happening?

Security threats have always been a concern when it comes to hosting information offsite. However, just by making security more fundamental to computing and including it at the database level rather than only in the application all applications can inherit that security. Having multiple security levels further enhances data protection, enabling reduction in the risk of compromising one's data.

Secured multi-tenancy is one such level of deterrence. By maintaining databases in separate containers, this creates a virtual moat that makes it harder for hackers to access all information at once.

Not only do security settings and service level agreements (SLAs) apply across tenants, SLAs can also be applied to individual tenants/containers to ensure that only role-assigned individuals are granted access.

In his keynote at Oracle OpenWorld 2015, Larry Ellison, Executive Chairman of Oracle Corporation and Chief Technology Officer, mentioned that 'making security features optional may have made sense at one point, when security features like encryption had a greater impact on processing speed, but it doesn't make sense anymore."

It is better to have security at the level of the processor than the operating system because silicon is more tamper-proof, and this is much safer than having it in software because software can be changed.

The philosophy behind security organzations need to adopt is that it should be 'always-on", and enabled by default across the entire technology stack and into the cloud for true safety.

Compute, Network and Storage are cloud units most people are familiar with – Oracle has taken this further with DBaaS – so at every layer, Compute , Network, Storage and Database we have security capabilities for Secure Isolation, Access Control, Data Protection, Monitoring, and Auditing. ◼

David Scholtz, CEO of Damballa; and Stephen Newman, CTO of Damballa

Visibility Is Critical

The security we know is always focused on keeping things out, but it's also important to look out malware that bypassed preventive measures By Matthew Yap

When a certain large university in the US decided to upgrade its security, it had to consider: 'where should we focus attention to and what could we be missing out?" Upgrading an entire network's failsafe or security system isn't an easy task and often the question is how an organisation can do so in the most holistic way. Enter Damballa, a security company that uses Big Data and Machine Learning to help organisations safeguard against criminal cyber activity like Advance Cyber Threats and data theft.

Recently, CHIP Malaysia managed to catch Damballa's Chief Executive Officer, David Scholtz, and Chief Technology Officer, Stephen Newman, to find out more about how Machine Learning can play a part in the digital security landscape.

Good morning and thank you for giving us the opportunity to know more about Damballa. Before we go into the specifics, let's start with the basic questions. Could you tell us what Damballa is all about?

David: Damballa was founded at the Georgia Institute of Technology, a research university in the United States in Atlanta, Georgia, in 2006. The

company is now 10 years old and was founded by a group of data scientist, threat researchers, and network security experts who were affiliates of the university; they were PhD candidates, professors, and researchers. They started the company because what they saw was that the threat landscape was going to continue to evolve, progress and mature, to the point that we will see the advantage move towards the side of threat operators and cyber criminals. Generally, because of the security we've had up until now has really been based on what we call blacklisting, which is essentially identifying what's bad and trying to prevent it from taking ownership of a device. With the proliferation of malware today and the ease of the infrastructure for threat operators to take advantage of, we have outgrown our ability to keep up with blacklisting. What we've done in the last 10 years at Damballa is to address that evolution and leveraging Big Data, but primarily to ways where we can determine when, where, and how threat activities take place without having to rely upon having seen the malware before or seen the actual compromise take place.

So the idea is to be better able to prevent an actual compromise from happening?

David: That's the idea, but the reality is that the criminals always have a first move advantage, so you can't prevent everything. Where we start to help make prevention better is by being predictive and really understanding when a threat is active, then take action before the real damage has occurred.

What kind of solutions do you offer to your customers and where did the idea for it come from? Could you tell us how Damballa is doing it differently?

Stephen: Absolutely. Most security solutions out there focus on having seen the malware before, so that they can protect you from being hit by the same malware they've seen before. An analogy I like is this: you have a picture of a criminal and you alert everybody about how he looks like. Now when everyone sees this criminal, they're going to stop him from entering a bank. It's easy when you've seen the person before and so most security solutions focus on being able to describe that picture and make sure that people can protect themselves from what is known. What we're seeing in the industry is that there are more bad actors out there than you can take pictures of. Threats are evolving so quickly - it could be the same 'person' but they've changed the way they look, so they bypass the 'pictures' stage.

What our solutions do is profile the behaviour, characteristics and traits of threats. These threats are probably going to get in that bank or airport, but by providing continuous monitoring of all the people in that 'bank' and studying their behaviours, we can figure out which person poses a high risk. By doing this, you'll be able to stop the infection from causing damage. Your machine may still get infected, but if you rapidly discovered these behaviours before it is compromised, you can respond to it before it can extract any data or cause damage to the network.

We're seeing a big change by using Machine Learning and the data science of Big Data to create those profiles, a behaviour-based model that can profile what a compromised device looks like so you can respond to it.

David: To elaborate further: if you study 10,000 bank robberies and you had a pulse monitor, a heart rate machine, and other things available. You can gather enough data and see, for example, that the individual attempting to rob a bank will experience an increase in temperature, or their heart rate might go up to 160BPM; there would be patterns which you can see. If it was just one person it could be an anomaly, but if

you've monitored that in 10,000 people then you have a profile that you can be confident about. Now when you keep constant watch over a bank and notice that someone's temperature is rising or heart rate is increasing, you have a high degree of certainty that this person is trying to rob the bank.

This is what we're doing in the networks of corporations. We look at how mobile devices, servers, and PCs are communicating and behaving, and by using Big Data we model and profile those behaviours that we see on a network. This helps us to be able to predict and recognise when something malicious is about to happen.

How does the Machine Learning play a part in reading these data?

Stephen: Anytime when you want to build a description of what malicious behaviour should look like, you're not going to build a description on a single feature like 'male or female"; that' just a single variable. What you want when you are describing suspicious behaviour is what is called a feature set, a long list of features that collectively describe a behaviour that's malicious. It may be 20 different variables and you don't want to be reliant on any one variable and you don't want to have a feature set that requires all 20 variables either, because a particular bank robber may not exhibit one of the variables. But you want to have a broad description, and that's where data science Machine Learning comes in.

At Damballa we see roughly 15 percent of the world's DNS activity, which translates to around 750 million devices worldwide. When we see their internet activity, we're able to see both benign and malicious behaviour across all that broad spectrum of activity. And when we can start picking out malicious activity from that spectrum, we can build those variables and feature sets that really describe that activity or behaviour. If you think about it, Machine Learning is predictive. It's saying 'we're going to build a model and it's going to help us make a decision." Ultimately, it helps you make a yes or no decision. I like to describe Machine Learning as a machine that acts like the human brain. Say you're walking down the street and you see things like the people around are well-dressed, the streets are clean and etc, you take in all these variables and your brain tells you that you should be safe here. But turn a corner into a dark alley and suddenly you see people poorly dressed and there's trash around, and suddenly you think you're not safe. Does any of these variable actually mean that you're not safe? No, but your mind has built these mental models. Big Data allows us to learn the differences between good and bad, so that we can associate different feature sets or behaviours towards being malicious.

Stephen: A lot of the technologies that are being used now, whether it be firewalls or endpoint protection, are designed to prevent people from getting in. It's like putting deadbolts on your doors and bars on your windows, to keep someone out. But the reality is that people are going to get in, so what Damballa is really focused on is complementing other technologies. We're going to constantly monitor what's going on inside your systems to determine if, where and when a threat has succeeded to penetrate those prevention defences, and do it in a way so we keep the individuals. It will allow enterprises to be efficient with their resources. Back to our bank analogy, rather than having to physically check each individual, which is time consuming and could potentially distract them from the real threat, they can then focus on where the threat really has compromised a system. It will have a higher degree of accuracy, allowing resources to take action, and have actual information to address specific threats.

Speaking of threats, it's a new year in 2016, so what are your predictions on the critical threats for this year?

Stephen: I think the bigger scope is to look at who could be targeted. I believe that there will be a continuation of attacks on automobiles, planes, trains, the transportation sector. In 2015 there was a lot of illustration on what could be done to automobiles. White hat researchers showed that 2mil Jeep Cherokees within the United States could be hacked remotely and taken control of. What you will see in 2016 is likely an execution of such threats. Imagine the problems that could happen if 2mil cars were hijacked; they could stop all car engines, cause traffic jams, disable safety hazards. That type of control is technically feasible, so the pressure is on the car manufacturers is to design more secure system when these cars are connected to the internet so that this can't happen. We think you'll see more about what can be done to not just automobiles, but all parts of the transportation industry. We can see that there some pretty big events going on this year, which would be prime targets. In the US alone there's the Superbowl and the presidential elections, then globally we'll have the Euro Cup 2016, all prime targets for something to occur.

As for specific threats, we certainly expect to see things like cyber espionage and data theft to continue; there's no reason it wouldn't.

David: I would like to add to that. In the last several years, we've seen that the notion of threats has become more prevalent. The regular consumer or individual hasn't been aware to some of the things like one country hacking into the system of another to get information for geo-political purpose, but in the last several years we've seen it start to become close to these individuals. We've had financial services or banks that got hacked, or the healthcare industry being threaten. The threat operators will focus their attention on where they can see returns they can gain from pursuing a threat campaign. A vertical that we're predicting will be targeted is the online gaming industry. It's become a phenomena of sorts. In the United States we have sites like FanDuel, large gaming sites that have billions of dollars being transacted and a lot of Personal Identifiable Information (PII), those are all possible targets and we predict that those sites will face an increase in cyber-criminal activity.

Gentlemen, you mentioned security for things that are connected to the Internet, so how vulnerable is the Internet of Things (IoT)?

Stephen: An interesting challenge that we have is that the vulnerability of the IoT all boils down to the question of: Did they design the software running on these items with security being first, or was it added later? We are deeply affiliated with universities and Damballa has a strong tie to the Georgia Institute of Tech. And we find it alarming how many different students from universities all over the world graduate with a computer science degree, but never had any class on how to do secure coding. You can take mobile devices as an example, which have been notorious for having a lot of malware. The reality, however, is that the infection rate on mobile devices is incredibly low compared to PCs. That's because Apple or Android-based vendors build security into its ecosystem. Take Apple for example, which designed its phones as secure mobile devices and therefore faced very low infection rates. Not that they can't be compromised, but the infection rate is very low because it's much more difficult to do so.

As we design whatever in the IoT, if the designers are designing it with security as a feature set then no one would have to face those threats. We certainly encourage that and want to make sure that as IoT grows manufacturers won't ignore the need to design security in the code, because in the long run it's going to pay off.

On a local level, what kind of industries would

benefit most from what you're offering?

David: On a global level, threat operators are looking for caches of information that can be sold. Relating to Malaysia, one of the things that will take place here is the increase in outsourcing of call centres. As an example, several of our customers are large companies in the Oil & Gas or manufacturing with call centres of operations here in Malaysia.

Stephen: Multiple of our customers have their instant response and security operation centres located here in Malaysia, so there certainly is a broad breadth of skill sets here. As our customer base has such a large presence here, we're looking to extend out directly to Malaysian companies, specifically to Oil & Gas, Telecommunications, and Financial Services industries. These are organisations that have content or material they need to protect, and to do so they need to have not just preventive controls to block out the known, but also constant network security monitoring so that when they are compromised then they can be discovered quickly. That's how all our customers will best benefit: by having that around-the-clock monitoring and being able to understand the behaviours that could compromise the system.

Next, we want to get a response from you regarding a commentary from one of our readers. He claims that Advanced Persistent Threats should not be a huge an issue in 2016, but what we understand that's exactly one of the areas that Damballa is proficient in. Could you give us a comment on that?

Stephen: Absolutely. I have seen nothing in the industry to suggest that the pace, in which advanced threats have brought so many attacks on different corporations, should slow down. As a collective industry, we have failed to move towards accepting the fact that we will become compromised. Despite the large press on all these attacks, we still think that if we can prevent it then we won't have to worry so we continue to sink a lot of money into preventive controls. There are very advanced organisations with a lot of data to protect that have moved to also adopt detect-and-respond type approaches, providing things like forensic solutions that can analyse what an endpoint is doing, or network monitoring solutions like ours. But there are still a lot of industries that have not made that move, and because of their vulnerable and how easy these attacks are to pull off, I think we're still going to see quite a few large name breaches and they will be significant losses to these threats.

We definitely agree with the likelihood of that happening. In that case, these people should look into moving to these solutions, so maybe you could talk about your solutions and what do they offer?

Stephen: Sure! We offer two different detective controls, specialised according to markets. For most enterprise customers we offer what's called Damballa FailSafe. That solution is designed to monitor all the network activity of devices inside the enterprise and track their behaviour over time, so we can find the ones that actively compromised. It great at providing incredible visibility on what's happening inside the network, not just attacks from the outside trying to get in. Our other solution is called Damballa CSP (Communications Service Provider) and is designed for telcos, wireless or fixed-line operators, and different ISPs around the world to help them understand which of their subscribers are compromised. It works towards providing benefits to consumers.

David: I just want to elaborate on what Steve talked about on the continuous monitoring on network activity and how it provides visibility. What's really unique about what it does is that it provides actual insight to what's being seen. It's not just about making activity visible, but rather to gather enough information and pull it together in a way that

DAMBALLA

truly become actionable information, giving insights to corporation about what that activity means from a risk profile. Ultimately, it comes down to the fact that we're not just trying to stop malware, but it's really about addressing the risk and providing insight on the network to focus on.

What kind of long term benefits would customers see in return?

David: Well, organisations are playing a game of catch up at the moment. A lot is resources is being spent on confirming, validate or dismiss that something is actually happening. So how we can help organisations in the long term is by keeping their head above the water, so to say, and over time it allows them to focus their resources to protect themselves better against these threats and persistent activity from threat operators. They are able to be proactive in spending time doing analysis on the right things, versus trying validate every piece of information they get from an alert-based system.

Stephen: I think there's two core benefits that can be gained from our solutions. The first is: Because we can rapidly identify which devices are compromised, they have less time to sit in your system and cause damage. By shortening that dwell time, risk is reduced for the organisation and that's the primary objective. Secondly, by the nature of what we do, every infection that we find is a compromised device that preventive controls missed. This can help improve the preventive controls. After all, the best ways to learn how to improve is learn where the holes are. So a lot of our customers use our solution to study to learn from these true positive infections we've discovered because of the visibility we've given them on where those holes are in their preventive controls. This is absolutely critical, because that's how an organisation can improve its security posture.

If there's one message you can give to organisations out there, what would it be?

Stephen: Increase your visibility. Don't pretend that you only have to protect threats from the outside getting in, accept that some will be getting in, and start giving yourself visibility on your devices as they communicate from the inside out.

David: The insight from that visibility that lets you address active compromise, but also to improve prevention. It's really most effective when used to evaluate where preventive controls are working well and also where it doesn't work well and to bolster it. That, we believe, is a more holistic way of detection.

Thank you for your time, gentlemen. Before we end, one last question I'd like to ask is: what does the security landscape, as a whole, need to do in order to bring about a utopia where malware attacks and threats being more of an exception than the norm?

David: Interoperate and share. There isn't going to be a single silver bullet solution to this. In our industry, we've talk over the decade about defence in depth or layered security. But it is through different technology providers, service providers, industries, companies, and consumers sharing information, because we're all in this together. Everyone on the white hat's camp really needs to work together to defend ourselves against black hats.
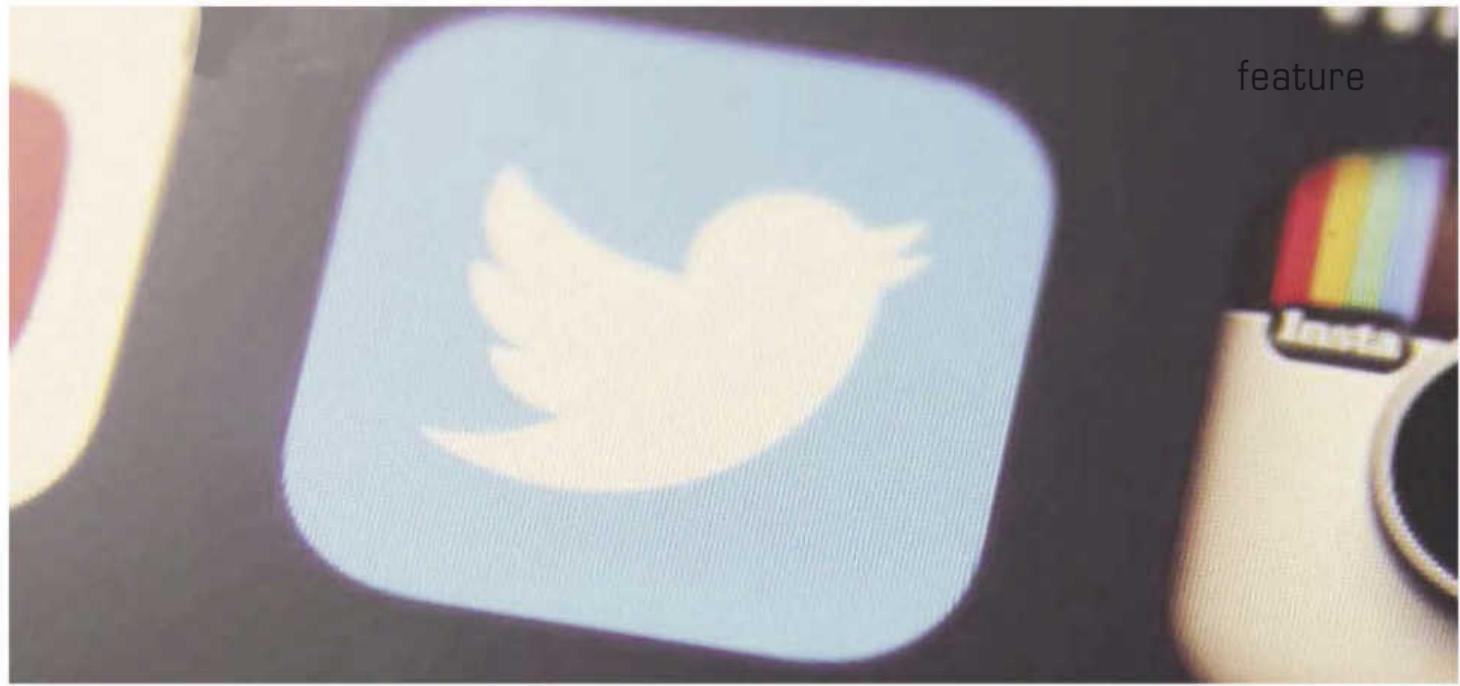
Twitter

Although Twitter lies in the shadow of Facebook as a social network, the service is probably the world's largest news dissemination platform

By Caren Stella Geiger

Inventor of the micro-blogging service	**Jack Dorsey**
Original name	**twttr**
Official launch	**15 July 2006**
First tweet	**"just setting up my twttr" on 21 March 2006 (Jack Dorsey)**
Maximum number of characters in a tweet	**140**
Name of the Twitter bird	**Larry Bird (after the ex-basketball player)**
Twitter employees worldwide	**4,100**
Market value	**ca. 19.01 billion US dollars (Nov. 2015)**
Loss in value since April 2015	**47 percent (as of Nov. 2015)**
Active users per month	**316 million**
Active users on mobile devices	**80 percent**
Number of active users who send tweets themselves (per month)	**117 million**
Estimated number of fake accounts	**20 million**
Number of verified accounts	**127,000**
Average amount of time spent on Twitter	**170 minutes a month per user**
Average number of worldwide followers per user	**208**
Person with the most followers	**Katy Perry, singer (61.2 million)**
Media site with the most followers	**YouTube (46.3 million)**
Company with the most followers	**Samsung Mobile (10.2 million)**
Most re-tweeted tweet	**Ellen DeGeneres' 'Oscar selfie' (3.4 million retweets)**
First user with a million followers	**Ashton Kutcher, actor**
Account with the most tweets	**@urbandictionary (4.31 million)**
Event with the highest activity	**Football WC 2014 (672 million tweets for #WM2014**
Highest number of tweets per second	**25,088 during the TV premiere of 'Castle in the sky'**
Tweets sent per minute worldwide	**est. 347,000 (as opposed to Facebook, with 382,000 'likes')**
Tweet with the gravest consequences	**Bomb scare in the White House after hacking of a Twitter account**
Percentage of the world's internet users who do not use Twitter	**90 percent**

Technilexicon- Skylake Processors

Intel has made its Skylake processors suitable for mobile devices with new power-saving functions. We explain how the technology works By Jörg Geiger

The 6th generation of the Intel Core processors, also known as 'Skylake' makes impressive claims: It is supposed to provide more performance while consuming less electricity. In comparison with an identically-configured system using the previous Broadwell processor, a notebook equipped with a Skylake processor is supposed to allow its owner to watch a movie for an extra hour when he's on the move, while simultaneously outputting a higher-quality picture. In order to be able to fulfil such promises, Intel worked flat out and installed interesting new energy-saving functions. In doing so, Intel is optimising two large domains: The first one encompasses all the power-saving mechanisms that are associated with the Skylake hardware, and which work independent of the deployed software. And then there are special power-saving features that are only useful to users of Windows 10.

Hardware optimisations on the CPU

Skylake relies on a handful of established procedures to implement internal conservation functions. One of them reads 'Deactivate what you do not require". The 'power-gating' procedure involves disconnecting unneeded components from the power supply. The power gate is similar to the flip switch on a power strip. What's new is the fact that Skylake administers specific power domains and installs many of these small power-gate transistors. These determine whether or not programmes are making extensive use of special functional units on the CPU. For example, if the advanced vector extensions for complex floating-point calculations are not required, the CPU deactivates them completely. In accordance with the principle of 'less is more", Skylake reduces the associativity of the L2 cache from an eight-fold magnitude to a four-fold magnitude – The fact that fewer sectors are reserved for temporary storage does not produce any performance-related disadvantages, but it does save electricity. Apart from that, the voltage transformer that has been a part of the processor since the Broadwell series has been re-transferred to the motherboard, which in turn effectively prevents the CPU from overheating. Computational operations such as video coding can be implemented more efficiently when the hardware is designed for it, which saves electricity. In case of Skylake, this primarily applies to the integrated GPU, which takes the task associated with the video decoding of new formats like H.265 away from the CPU.

However, even these power-saving functions seem moderate in comparison with the optimisations that are possible in conjunction with Windows 10. The most important feature is the speed-shifting feature. The successor to speed-stepping has been integrated into Windows 10 since build 10586. It involves the manner in which processors are clocked, and above all, what controls this process – the CPU or the operating system. Processors recognise various performance states (P-status) and power levels for CPUs, which are determined through the clock frequency and the applied voltage. P0 (performance status 0) is the full-throttle level (turbo), and the capacity keeps decreasing from P1 and P2 to Pn. If the CPU is idling during the speed-stepping operation, the clock pulse and voltage are decreased to Pn. If a programme requires the capacity, it can be increased within about 30 milliseconds. Windows determines which of the P-states between 1 and n is being used by the processor. The CPU only controls the last grain of capacity (turbo to P0). During a speed-shifting operation, Windows 10 hands control over to the CPU. In such a case, Windows no longer independently determines the P-state, but simply indicates the requirements associated with the minimum and maximum capacity. The CPU determines which clock pulse is required. The advantage: The hardware algorithm for switchovers is significantly faster than the speed-stepping operation. In case of speed-shifting, the switchover from one power level to the next takes just 1 millisecond. This increases the perceived power for the user, i.e. the system responds at a higher speed. And it also saves electricity, because the system switches over to the economy mode much quicker. In order to ensure that this combination works perfectly, Windows 10 features an energy estimation engine, which continuously analyses the energy consumption and uses this data to create a forecast.

Perfect coordination with Windows 10

Another new power-saving function that is associated with Windows 10 is the duty-cycling function. This is the idea behind it: There is a particular power level after which it no longer makes sense to keep going lower. Otherwise, the user would get the impression that his system is no longer working smoothly. In a duty-cycling operation, the processor rapidly (a duration of 800 microseconds is possible) switches over to a higher frequency, processes pending tasks and briefly deactivates itself completely, only to speed up a little later. All in all, this makes it possible for tasks to be completed at a quicker pace, and it also saves electricity, in comparison with slower but continuous processing.

The standby feature is an important feature for users who hardly switch off their devices. In this case, Skylake has expanded the options offered by Windows 10. Microsoft calls it 'Modern standby". This feature is based on three different modes: The well-known S3 mode (suspend to RAM) has been supported by connected standby (S0) since Windows 8. Even in this case, Windows consumes a very small amount of electricity, but wakes up very quickly and can even receive messages when it's asleep. Thanks to Skylake, there is now a third player, i.e. the 'Disconnected standby". It responds very quickly (wake-up time: 500 ms), but unlike connected standby, it does not require either an SSD or any special network hardware on the mainboard.

Reducing power consumption

Intel's Skylake CPUs step in at various points to conserve electricity. There are functions that are completely moulded within the hardware – Only Windows 10 users can benefit from the others.

Changes in the processor

Intel has adjusted its CPU architecture in four areas, in order to attain a lower energy consumption level in Skylake.

Power-Gating
Built-in power gates permit the complete deactivation of unused CPU functional units.

Reduced cache
In the L2 caches, Skylake halves the number of sectors that are reserved for the temporary storage of data (associativity).

GPU
The GPU takes care of more special calculations, such as the video coding of new formats. This saves electricity.

Voltage regulators
In case of Skylake, they are on the motherboard, and not in the chip, as was the case with Broadwell. This relieves the thermal load on the CPU.

Graphics processor

| eDRAN Controller | Core | Core | Core | Core | System Agent |

L2 | L2 | L2 | L2

L3 buffer memory

Memory Controller IO

Optimal regulation of CPU clock frequency

Duty-cycling: The CPU upshifts to the 'optimal frequency", and then pauses completely. This is more efficient than reducing the clock frequency when the senergy consumption (TDP) is limited.

Speed-shifting: Windows 10 hands its control over the power levels of the CPU to hardware algorithms. This permits faster switchovers (1 ms) than with speed-stepping (30 ms).

Previously

Without duty-cycling

Clock frequency

Optimal frequency
Working frequency

Time

Skylake

With duty-cycling

Clock frequency

Working frequency

800 microseconds

Time

Speed-Stepping

Clock frequency

P0 ← Turbo frequency
P1 ← Guaranteed CPU clock pulse
P2
— Controlled by Windows
Pn ← Minimum CPU clock pulse

Speed-Shifting

Clock frequency

P0 ← Turbo frequency

Sector requested by Windows 10

LFM ← Lowest frequency (low frequency mode)

Performance states (P) regulated by the CPU
Performance states (P) regulated by Windows

Windows 10 collects energy data for Skylake

System services monitor sensors, tap statistics and keep track of the user behaviour. A central Windows component (energy estimation engine) thus calculates the remaining runtimes and the precise power consumption.

Input

- System service monitors hardware
- System service collects statistical data about hardware
- System service monitors software usage

Data →

Energy Estimation Engine

CPU Energy Estimator	GPU Energy Estimator
Display Energy Estimator	Network Energy Estimator
Memory Energy Estimator	Periphery Energy Estimator

Data →

Output

- Estimation of the battery service life of the whole system
- Listing of power consumption of hardware
- Listing of power consumption of software

Windows 10 clearly processes the output of the energy estimation engine in the settings

Every Car Will Be Able To Do This In 5 Years

Tesla, S-Class, BMW 7 series – Luxury cars that serve as the technology template for the cars of the future By Fabian von Keudell

Foldable door

The ultrasonic sensors in the Tesla Model X detect obstacles, and use double hinges to open the swinging doors upwards in tight parking bays

Model for the highway of the future

The A9 in Bavaria is at the disposal of car manufacturers, as a test route for automated and networked driving. LTE is available across the entire route, since the car-to-car communication happens via LTE. In the future, the on-board systems of the cars are supposed to report hazardous situations to each other and warn the drivers in advance.

The A9 'digital highway' project is supposed to become the most modern highway in the world. No information has been given regarding whether and when new test routes would be opened.

Low-cost luxury features

The new Opel Astra, which has a price tag of about 17,000 euros (RM80,000) – has many features that are only available in the upper-range models manufactured by Audi & the likes.

These features include an LED matrix light: Its range of 350 metres is not as high as that of the new laser light. However, just like its laser equivalent, it also possesses an automatic anti-glare system.

Furthermore, there is also an emergency braking function, which reduces the speed if a collision is imminent. Opel has implemented the eCall emergency call system that is to be mandatory across the EU from 2018 onwards as an internet access point and as a hotline function (similar to BMW's optional ConnectedDrive), under the name 'OnStar'.

Air filter

The Hepa air filters in the latest Tesla Model X can filter out 100 percent of all bacteria and viruses. The interior could be as sterile as an operation theatre
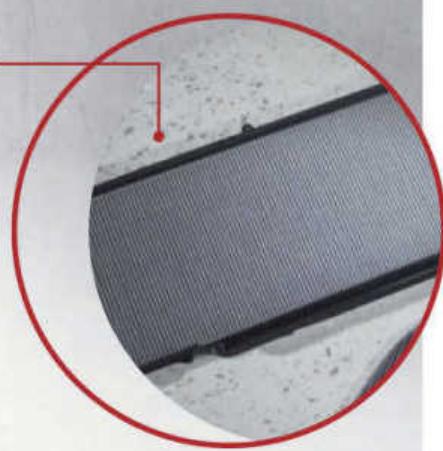
Partially autonomous driving

With the help of 12 radar and ultrasonic sensors and cameras, modern Tesla cars can independently remain in the lane at any speed, adhere to the speed limit and follow other cars at a distance specified by the driver. Models S and X are the first cars to be able to change lanes independently.

Parking by remote control

At the push of a button, the latest premium vehicles can park themselves independently, regardless of whether they are to be parked across or along the lane. However, there is one problem: If another vehicle is parked right next to the first one, it can be difficult to get out of the vehicle. While Tesla solves this problem with special doors, BMW uses a remote control for its vehicles. Users of the display key can start the car wirelessly, and use the touch screen to make the vehicle move forwards or backwards from the outside. Ultrasonic sensors prevent collisions with other vehicles or walls. The key also displays whether the windows are closed and the doors are locked., Not only that, the key also displays the remaining range, and lets the user activate and deactivate the air conditioning system or the heating system.

Glare-free laser light

The BMW 7 series and the Audi A8 are the first models to use a glare-free laser light. More than 420,000 micro-mirrors are used to project the high beam onto the street in a manner that ensures that incoming and passing vehicles are not bothered by the light beam. This is made possible by a camera that is integrated into the windscreen – It observes the traffic situation and focuses the laser light accordingly.

With a brightness of 340 lux, the laser light is just one percentage point below the legally permissible maximum level; its range of about 600 metres is almost twice as high as that of a conventional LED high beam, but it only consumes half as much energy.

BMW

AUDI

Belt bag and crash-seat

Mercedes and Ford offer airbags in the belt – but only for back seat passengers, since there's no front airbag in the rear section. More safety for the passengers is offered by Mercedes' new crash-seats: In case of a lateral crash, the back-rest 'shoves' the passengers away from the door. Furthermore, the radio plays at a high volume – This protects the ears from an airbag acoustic shock.

Driving style
Often brakes jerkily: Higher insurance premium !

Speed
Always drives too fast. Interesting in case of a lawsuit.

Psyche
Pharmacy app transmits dosage of anti-depressants to third parties.

Weight
If he doesn't cover 1,846 metres on foot, he'll be out of the fitness tariff.

Transparent Humans

By law, medical offices and cars have turned into data gold mines for many companies. Giant platforms with highly sensitive data emerge, but critics are reassured: Everything is secure and voluntary – as always

By Roman Leipold

Don't eat your food like that !" We have all heard this sentence when we were younger. Our mothers are usually responsible to stop us from over-eating. In this era, digital technology has already made many jobs superfluous, and maybe mothers are next on the list: The company HapiLabs, which was founded in Hong Kong is replacing a mother's admonishing voice with a vibration and LED signal. The 'HapiFork' (a fork that is somewhat clunky on account of the integrated technology) triggers this alarm if we start eating too quickly.

Regardless of whether or not this digital revolution does away with our mothers, it has definitely displayed a good appetite for data. With the help of a wireless connection, 'meal stats' like the 'average eating speed' (i.e. the number of fork movements per minute) are sent to the PC or smartphone, where they are processed graphically – The company proudly declares that this is done in real time. Consequently, while we're eating too fast, we could observe that we're eating too fast on the mobile phone that's right next to the plate.

If we haven't lost too much time because of the healthy habit of eating slowly, we can use social media platforms to disseminate snazzy charts illustrating our slow-food successes. After all, the community has to know how much attention we pay to ourselves. The Hapi-Dashboard even facilitates an online challenge: Competitive eating with inverted signs. However, Hapi is significantly more discrete when it comes to informing users about another one of its services. The data privacy

Daytime driver
Never drives at night. Liability and partial insurance become cheaper.

Pregnant
Diaper advertisements arrived when nobody even knew about it.

Fork without a cable

The 'HapiFork' restrains fast eaters using a vibration alarm. Furthermore, the gadget counts the fork movements per minute and sends the data wirelessly to the smartphone.

Miniature technology for the physically conscious

Smaller and smaller sensors, batteries and radio modules make it possible: Digital gadgets like fitness trackers or smart watches turn the body into a controlled data object.

statement states that the company reserves the right to forward the data to third parties. The statement explicitly mentions marketing and advertising companies, as well as market researchers; data regarding eating behaviours, gender and body dimensions can be disclosed.

When it comes to the wireless fork, you can take it or leave it. However, its integration into the digital world represents an example of the booming self-tracking industry. The modern contemporary measures all the signals emitted by the body and mind, thereby creating data that pleases both him and the companies that are rapidly jumping on the bandwagon. Big mother's watching you? It might sound like an exaggeration, but self-optimisers are voluntarily sending their data over to the large memory cloud.

However, the experience demonstrates that no user retains control over his data. Surveillance has become part of the daily routine. Every new service demands a tribute in the form of data. Those who continuously chastise themselves with a Bluetooth fork could develop nutritional problems or eating disorders. But perhaps such people are simply health-conscious or fond of technology. In any event, they are easy targets for solution-related offers; pharmaceutical companies, the fitness industry, wellness companies, dietary experts and app and gadget developers will take every opportunity to send such messages to these users. The offers are customised in a very precise manner, since the potential customer constantly sends the necessary data.

"More and more medical insurance companies are interested in such data"

Andrea Voßhoff, Germany's federal commissioner for data protection and freedom of information

Never-ending patient data

The pet 'electronic health card' (eGK) project is a bureaucratic feat that leaves many open questions. Data protection advocates complain that a gigantic telematics infrastructure is emerging.

feature

What is a cool feature for early adopters today will be a killer app tomorrow. Especially when it comes to the health care system, public health and cost containment serve as an alibi for the introduction of digital mass surveillance instruments.

In this regard, a central role is played by the electronic health card (eGK). From 1 January onwards, it will have to be presented during every visit to the doctor. The technical difference between the eGK and its predecessor (the health insurance card) demonstrates where the data journey is headed: Unlike the old card, the new one does not have a memory chip; instead, it has a processor chip. Basic data (such as name, gender and insurance status) has to be saved in both cases. However, the new eGK can also process sensitive information (e.g. prescriptions, patient files and services rendered). The patient's approval is necessary for most of these applications.

In spite of the encryption of the data and the 'two-key principle' (the authorisation procedure only works with eGK and an electronic healthcare profession ID), opinions are divided when it comes to the security of the data. Since the eGK only contains 16 Kbytes for medical data, most of the information is stored on the servers of a telematics-infrastructure.

The physician Manfred Lotze is one of the critics of this enormous data collection operation. He represents the IPPNW (International Physicians for the Prevention of Nuclear War – Doctors and social responsibility) in the action coalition called 'Stop the eCard'. 54 organisations are members of this coalition. Mr Lotze believes that it's only a matter of time before it becomes possible to snoop on the medical data stored on the central servers: "The NSA has shown us how quickly data can be decrypted. That should even convince the last believers in the security of the procedure. Those who require medical data will get it – This will either be done illegally by stealing data, or it will be done legally by temporarily changing the law."

Even though Gematik – which operates the eGK infrastructure – emphasises the information-related self-determination of the patients, the voluntariness of several disclosures doesn't necessarily have to be a permanent thing. So far, the project has cost a lot more than a billion euros. In terms of the mandatory data, it isn't that different from the old insurance card, apart from the now-obligatory photograph.

Health turns into a data business

Jens Spahn, health expert of the CDU, has let the cat out of the bag vis-à-vis the Deutsche Apotheker Zeitung (German pharmacists' newspaper): "The process of digitalisation has been in full swing for quite a long time. We have fitness armbands, dermatologist diagnoses that can be conducted through mobile phone photographs, apps for diabetics and facilities that allow people to chat with doctors using their smartphones. An unbelievable amount of activity is taking place. There are new offers every day, and some of them even come from German start-ups. However, the regulated health care system is still stuck in the previous century: It uses paper receipts, medical reports that are sent via fax and multiple diagnoses that are not tailored to one another. The communication processes are reminiscent of the 1980s. Therefore, we have to finally double down on the electronic health card."

According to Mr Spahn, when the telematics highway comes into being, "we will have excellent conditions for all other applications". One could also use the phrase 'for transparent patients'. However, the notions of the health spokesman of the CDU/CSU faction go even further than that. He's calling for open interfaces for telematics: "It must be designed to be so open that external offers and applications from the start-up domain will be able to latch on easily".

Zeroes and ones take over the medical sector

Hundreds of thousands of mobile apps make it possible to collect medical data. For the health industry, such data represents hard cash; however, some transactions could founder on data protection.
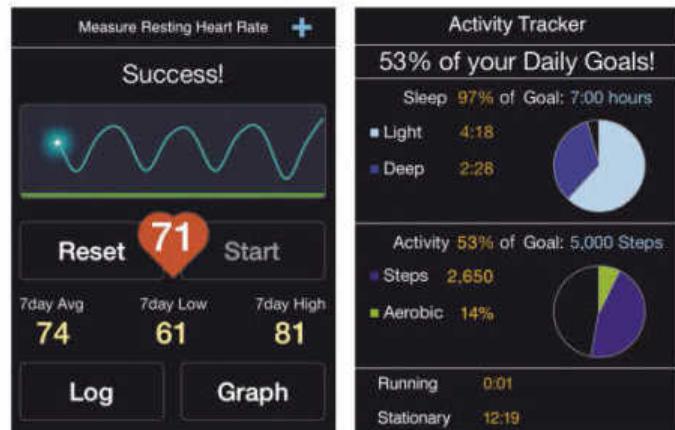

"External providers must be able to latch onto the health card"

Jens Spahn, health spokesman of the CDU/CSU faction in the German federal legislative body

Health care system as an economic factor

The medical sector has enormous economic significance. In 2013, about 315 billion euros were spent in Germany. This equates to an expense of 3,910 euros (RM18,188) per citizen, and the trend is pointing upwards.

in Mrd. €

Year	Value
2000	212.8
2001	220.1
2002	228.0
2003	233.6
2004	233.8
2005	240.4
2006	246.0
2007	246.0
2008	264.4
2009	278.4
2010	287.4
2011	293.8
2012	300.4
2013	314.9
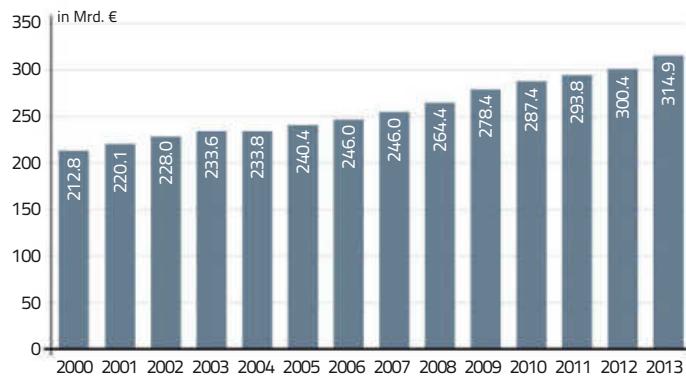
"Healthy people live better – and public health costs also drop"

Giovanni Liverani, chairman of Generali Deutschland Holding AG

Mr Spahn isn't just pleading for more commerce and less data protection in the health care system, he's opening a large door that could lead to a control society. Has your doctor diagnosed a case of obesity? Every fifth German suffers from this advanced stage of being overweight, which is also called adiposity. An important part of the therapy is the optimisation of the patient's eating pattern. This, along with the medicines and operations, drives the costs through the roof. From the point of view of the health insurance funds, patients with severe obesity cost about three times as much as patients whose weight is at a normal level.

If your medical insurance company wants to save money, it might ask you to use the wonderful HapiFork. The doctor and the insurance company could use the telematics interface to check and assess the usage of the control fork. An utterly limitless amount of data relating to the patient could be generated in a similar way; currently, more than 400,000 apps collect health data, and all of them will demand a tribute. Mr Manfred Lotze has come to the following conclusion: "The eGK will only serve the interests of the health insurance funds, the health economy and the IT industry."

Naturally, nobody is obligated to digitally survey his body and provide this data to doctors, health insurance funds and private companies. 20 years ago, nobody was forced to maintain a bank account online. Back then, incentives such as low interest rates (or no interest at all) were used to encourage technology-minded bank customers to fill out transactions on their home PCs. Today, it's quite expensive to avoid conducting bank transactions on the PC.

The trick of using incentives or subtle manipulation to convince a target group to fall into a certain pattern of behaviour is called 'nudging' by behavioural economists. Critics consider this to be a devious form of domination. Even in the political arena, nudging is understood to be a way of forming the ideal citizen, without having to explain the respective contents to him or pass unpopular laws. First Washington, then London, now Berlin: Since 2015, three nudging experts have been working in the Federal Chancellery.

The insurance companies combine nudging with the possibilities afforded by big data. Industry giant Generali plans to use the 'Vitality' product range to enter the German market in the first half of 2016. Customers who improve their health or fitness levels and transfer the corresponding status data to Generali through an app will receive perks such as discounts. The company dutifully states that all of this will be completely voluntary – As voluntary as online banking. As soon as the number of users reaches a critical mass, the bonus for the early adopters will become a minus point for the old-fashioned die-hards.

This new form of monitored personal insurance is called 'pay as you live'. Taken to its logical conclusion, it represents the end of the solidarity principle in the insurance industry, and the triumph of rules and control. Those who will not or cannot live as the insurance companies demand would need a lot of money – Alternatively, such people might not get insurance at all.

However, not all providers are playing along. According to Ralf Kantak, chairman of the Süddeutsche Krankenversicherung (South German health insurance), "Such tariffs would inevitably lead to the disappearance of solidarity. If individual tariffs emerge because of the collection of data, the solidarity principle associated with an insured community – which represents a central core of private health insurance – would be dismantled." Generali doesn't agree: "In spite of risk-oriented allocation, the insured group in the 'Vitality' tariff will always remain large enough to be able to balance the risks within the collective."

PHOTO: VHV VERSICHERUNGEN ILLUSTRATIONS: ANDREIA MARGARIDA DA SILVA GRANADA

The new deal: Data for euros

Telematics (which is an artificial word that comes from 'telecommunications' and 'informatics') is the new trend for automobile insurers in Europe. It uses a small data box that is installed in the car to monitor the customer's driving style, and offers discounts of up to 30 percent.

Mandatory from 2018: The E-Call emergency call system

From 2018 onwards, the E-Call emergency call system will be mandatory for every new vehicle in the EU. Many insurance companies are hoping to be able to connect their own telematics services to the hardware.

2 Location
The location is determined via satellite and GPS, and voice communication is established between the driver and the control centre.

3 Emergency call centre
It receives important data regarding the vehicle and the accident. If nobody responds to a radio message, a rescue team is dispatched.

1 Emergency call
In case of an accident, E-Call automatically calls the rescue coordination centre. The alarm can also be triggered at the push of a button.

4 Help
The control centre notifies the rescue service and provides it with all the information and data regarding the accident.

34% of German citizens

are, according to a new study by Bitkom Research, approve of the fact that data related to their vehicle, driving style and location is collected and processed further

Telematics on the fast track

Automobile insurers have been experimenting with telematics tariffs for a long time. The 'Telematik-Garant' (telematics surety), a policy of industry giant VHV rewards a perfect driving style with a discount of a maximum of 30 percent. A telematics box that fits into a 12-volt port transmits important driving style data to a service contractor of the insurance company.

However, the relatively high technology and maintenance costs (about 100 euros per annum) represent a stumbling block for the insurance companies. However, from 2018 onwards, the cards will be re-shuffled in the EU: At that point, the E-Call emergency call system will be mandatory for all new cars. The box possesses a mobile transmission unit, a GPS facility and a speech module. In case of an accident, it automatically contacts the emergency call centre.

Furthermore, it transmits the accident time, location, vehicle identification and other information to the next rescue coordination centre. E-Call can also be triggered manually. In each case, a voice communication link is set up with the control centre, so that additional accident-related details can be provided.

Thanks to quicker emergency measures, E-Call is supposed to save the lives of 2,500 accident victims every year in the EU. However, data protection advocates are taking a critical view of the project, because it theoretically fulfils the technical pre-requisite for an EU-wide surveillance infrastructure. As of now, such an infrastructure would be opposed by strict data protection regulations. However, just like the scenario involving telematics in the health care system, private providers also want to get involved with the E-Call system. In this regard, the car manufacturers have so far had an initial advantage: With their increasingly powerful on-board systems, they can collect data without end.

While talking to CHIP, a board member of an automobile insurance company expressed the fear that this initial advantage would mean that car manufacturers are pre-destined to poach within the insurance business using combo packages involving new cars as well as insurance. Even in case of damage, car manufacturers would derive a benefit if emergency calls reach them or their partners via a breakdown app. Consequently, insurance companies and free workshops have been requesting the EU authorities to establish open E-Call interfaces. If they succeed, they will be able to use telematics services and damage management services to make money. That might be good in terms of competitiveness, but when it comes to data protection, it's worse than the previous solution.

The car manufacturers have until 2018 to get their customers used to proprietary systems, which will then run in parallel with E-Call, within the framework of the infotainment systems. All the large car manufacturers have developed their own digital systems, along with accompanying apps and partner offers; a good amount of money can be made through such services. However, a good entertainment system also encompasses the integration of the smartphone, and the Android Auto and Apple CarPlay operating systems are available for this purpose.

Data protection as a discontinued model

Rumours that Porsche was going to ban the Google system from the new 911 Carrera have been denied by the sports car maker. All the same, only Apple is to be integrated during the initial phase, along with the company's own system. An American journalist reported that Porsche rejected Android Auto because of its hunger for data. Google could use the system to exploit important engine data. The company could then use this data for its own services, or for its own vehicle-related developments.

Telematics in the car: Customers want clarity

A representative survey conducted by Bitkom Research (September 2015) shows that when it comes to telematics services, almost all car drivers believe transparency is important and want to maintain control of their data.

98%	97%	89%
I want to be able to view all the data that has been collected regarding my vehicle, driving style and location at any time.	I want to be able to prevent the transfer of data from my vehicle at any time.	Car manufacturers and mobility providers should disclose how they're going to handle the data collected from customers.
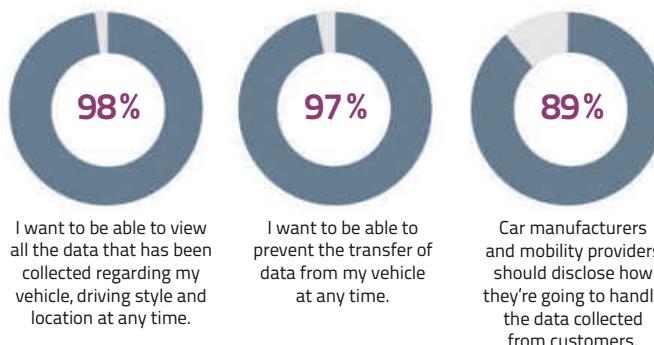
Is Porsche putting the brakes on Google?

With Android Auto, smartphones using Google's mobile OS can be integrated into the infotainment systems of new cars. However, Porsche's new 911 will initially only offer Apple CarPlay – If rumours are to be believed, this is because Android Auto collects too much data.


"We must raise the costs of data collection"

Bruce Schneier, data protection expert and author ('Data und Goliath', Redline Publishing House)

In 2014, the automobile industry earned a total of 368 billion euros, which means that it is the most powerful sector in Germany, in terms of revenue; in this regard, it is closely followed by the health sector. Taken together, the two sectors provide services to the entire population: The Germans love their cars, and everybody falls ill every now and then. All of this gives rise to gigantic amounts of highly sensitive data. However, when it comes to these two sectors, the legislature is introducing structures that do not clearly separate the interests of the state and the economy, and which indicate to the people that data protection is becoming a thing of the past. Chancellor Angela Merkel recently clarified the direction: "In many cases, our relationship with data is too heavily influenced by thoughts of protection (...) and perhaps it is not influenced enough by the thought that interesting products can be developed with the help of data." ◼

CHIP
MALAYSIA

YOUR FAVOURITE I.T. & TECHNOLOGY MAGAZINE IS ALREADY AVAILABLE DIGITALLY!

Firmware Updates
CES 2016
LegalTech: E-Signature

A Glimpse Into The Technology Of 2016

A sneak-peek into the technology of tomorrow, today

REVIEWS: MSI GT72S 6QE Dominator Pro G, GIGABYTE P34Wv5, ASUS Maximus VIII Formula, Sony Xperia Z5 Premium, Microsoft Surface Pro 4
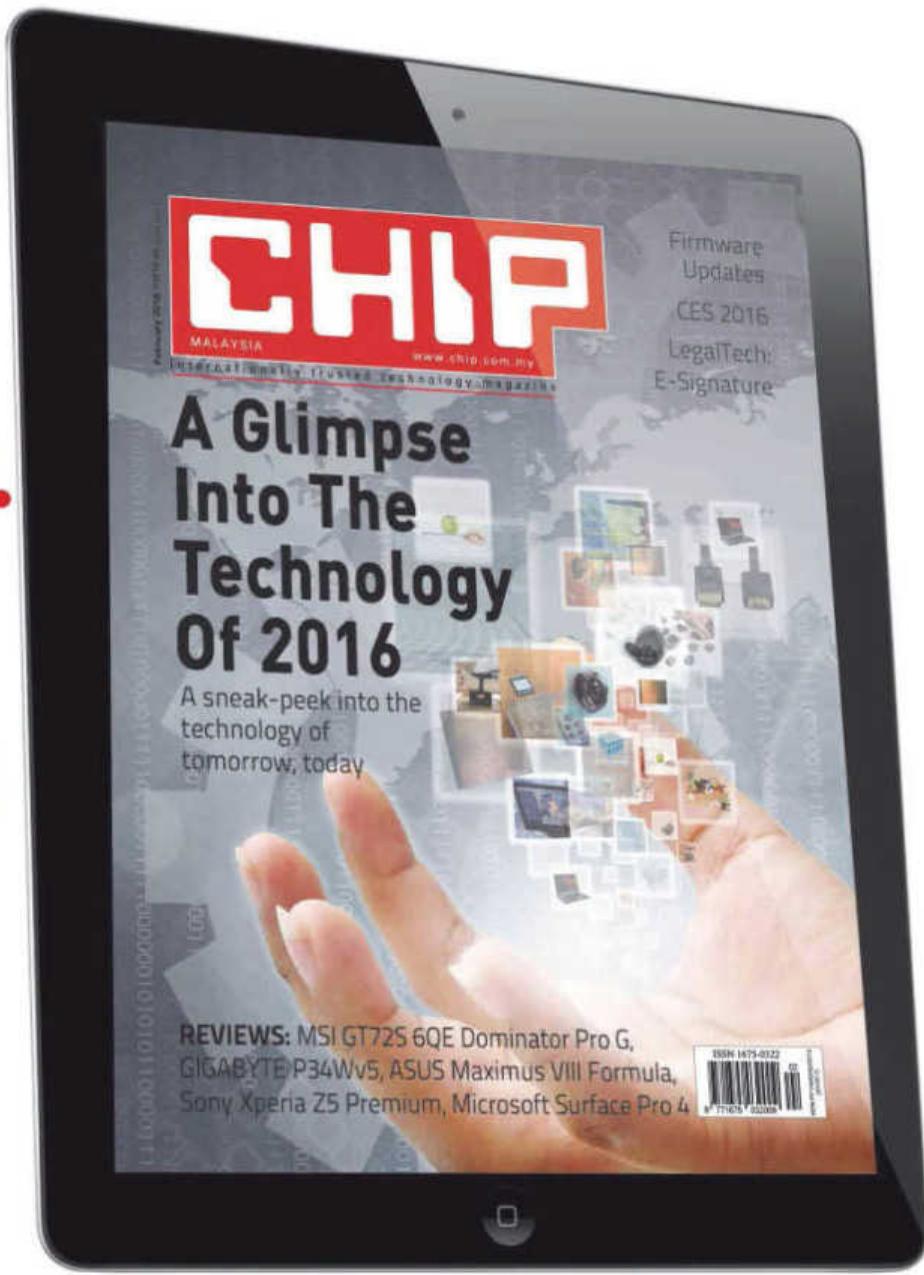
Here's how to order CHIP Malaysia to go :-

Step 1: Download Zinio
CHIP Malaysia will be available on Zinio, one of the most popular digital newsstands on the internet. They have an iOS app as well, which is where CHIP Malaysia is sold.
Tap on the App Store icon on your iPad and search for 'Zinio'. The first entry should be Zinio Magazine Newsstand & Reader. Click on it and wait for it to be downloaded and installed.

Step 2: Creating a Zinio account
You will need to have an account with Zinio to download magazines from its store. Zinio will keep a record of what you've purchased and if you restore your iPad, all you need to do is to re-download your content. The best part of all? Re-downloads are free!
You can create a Zinio account from the app itself or log on to www.zinio.com to do it. All you need is an email address and a password.

Step 3: Download CHIP Malaysia
Launch Zinio and you'll see three tabs at the bottom. Click on the 'Shop' tab and search for 'CHIP Malaysia'. When you see our cover, that means you're close to getting your hands on CHIP Malaysia's iPad magazine.
You have the option to get the newest issue or subscribe to 12 issues. Select an option and pay for it via PayPal or Credit Card.

Step 4: Read
Once that is done, tap 'Library' at the bottom bar and you'll see the cover of the issue you bought. Tap on it and you're done! Zinio will let you read while it downloads the remaining pages. Enjoy!

www.chip.com.my
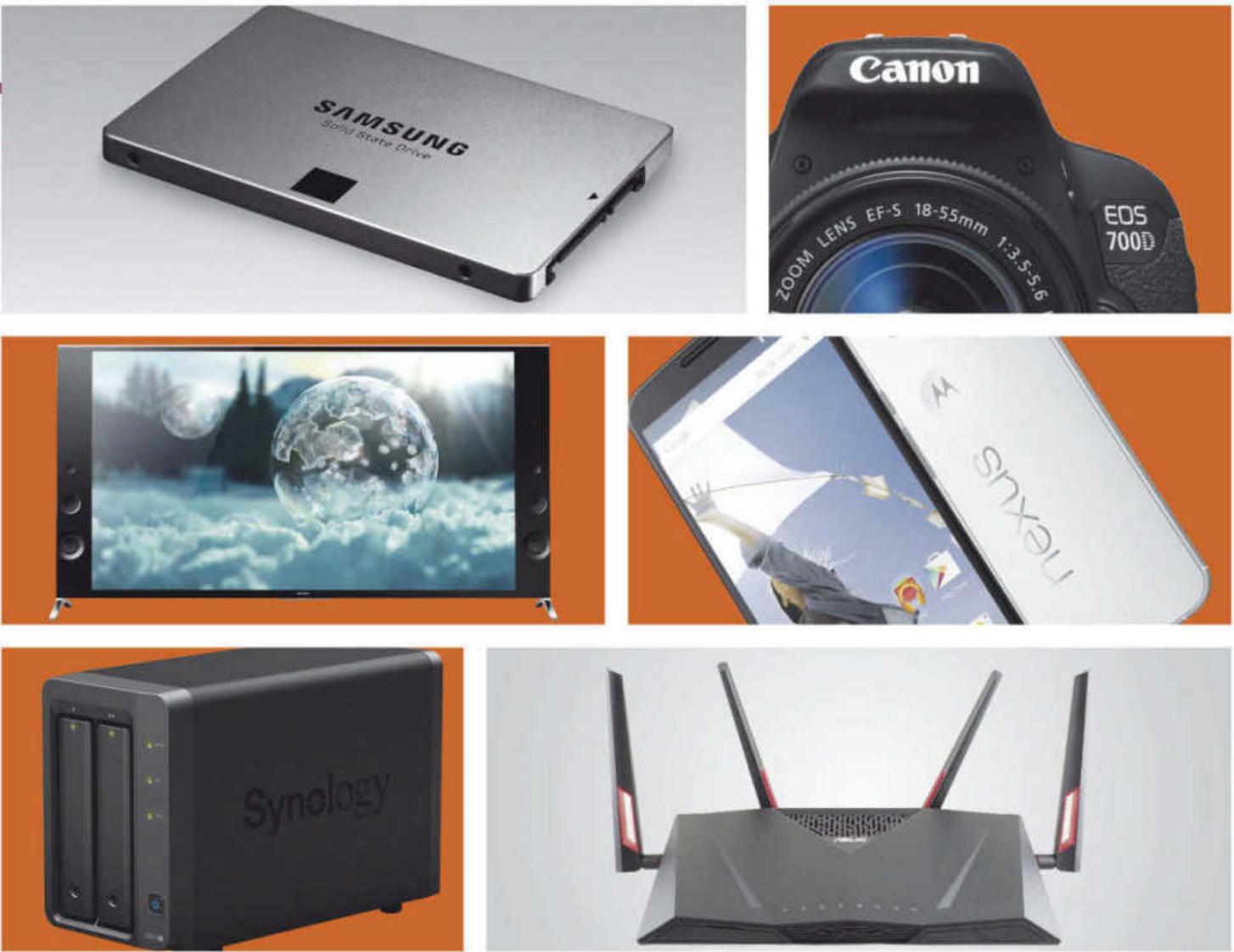
New Features For Your Hardware

A firmware update, if done often and correctly, ensures more performance, safety and functions in your electronic devices By Christoph Schmidt

Much of what consumer electronics and computer technology accomplish is thanks to the software rather than hardware. You don't always need a new model for new functions, more performance and more safety – an updated firmware is often enough. Devices connected to the Internet run and install such updates automatically. For cameras or e-book readers, you must manually download a file from the manufacturer's website and transfer it to the device via SD card or USB stick. In this article, we will show you how to get and install the update for various hardware categories. Normally, when the manufacturer rolls out an update, it should also be installed;

even if it is only for stability or for filling security gaps. But sometimes, caution is advised, because the new software occasionally overstrains the existing hardware – most notably, older iPhones still work on the newest iOs very sluggishly. If the manufacturers don't provide any more updates, in the case of some device types, open source developers will step in and provide smartphones with the current Android versions long after the manufacturer support has ended. But then, you'll have to say goodbye to support and guarantee – but this shouldn't be difficult to deal with for an ageing device.

Mobile phones & tablets: a new operating system

On mobile devices, a latest operating system is a necessity for security reasons. This is demonstrated by the security gap, "Stagefright", which makes most Android devices vulnerable to malicious codes from media files received via MMS. None of the Android versions before 4.1 offer any protection from this; they can be seized completely and without the knowledge of the user just on receiving an MMS. Smartphones and tablets with Android 4.1 and newer versions at least make targeted attacks via these gaps very difficult, but at present, only devices with Android versions from 5.1.1 onwards with the newest patches are completely secure. You should always use the latest available Android version, which you can find on your mobile phone under "Settings > About this telephone > Software update" - for this to work, you will need to be connected to a WiFi network (the fastest possible one). Caution: the note that says that the software is in its "latest version" only means that there aren't any newer versions available in this way – if the aforementioned points are true, it is still too old.

If your device manufacturer leaves you in the lurch with an old OS version, you can check whether a custom ROM for your device maintained by the community is available. Your best chances here are with the most popular ROM, Cyanogenmod. You will have to dare to try the somewhat complicated flash process, which is well-documented. Look for your model at http://download.cyanogenmod.org and click on it. If you find a version of Cyanogenmod 10.1 or later, that is a few days or weeks old, you should consider installing it. The "Device Wiki" link contains more information and an installation guide.

For Apple's iPhones and iPads too, the following is generally true: the newer the operating system, the better – with one restriction: the oldest devices on which a new iOS version still runs according to Apple's compatibility list are therefore almost always overstrained in reality. They jerk and stutter following the update – especially if it has too many apps installed and the memory is full. For example, the latest iOS 9 ideally shouldn't be installed on the iPhone 4s, iPad 2 and the first iPad mini.

The Apple devices generally inform the user as soon as an update is available. You can then install this update directly by pressing the button in this message. In order to search for updates manually, click on 'Settings > General > Software update" when you are connected to the WLAN.

A safety plus for WiFi routers

The router is an especially rewarding target for attacks since it mostly runs for a long time or even non-stop, and as the centre of the home network, enables access to the entire Internet and data traffic. In addition, the manufacturers are involved in different degrees, which affects security updates for older devices.. These include a web interface responsive to mobile devices, an improved overview of the home network with updates that come with a variety of fixes, such as security patches, performance improvements, UX updates and more.

Similarly, if an official router update isn't enough, depending on the make and model of your router, it is also possible to flash the


Google's Nexus devices are the first ones to get new Android versions, and will be kept up to date with the latest software even years after their release.

Custom ROM manufacturers

CyanogenMod	Active developer, wide-ranging device support	http://cyanogenmod.org
SlimRoms	Slim, minimal Google apps	http://slimroms.net
MIUI	Chinese Rom, stylish	http://en.miui.com
PAC-Rom	Greatly customized, for tinkerers	http://pac-rom.com
AOKP	Many visual effects, For tinkerers	http://aokp.co
Paranoid Android	Was very active, development is currently paused	http://aospa.co

Custom ROMs allow a latest Android system to be used even if there are no updates available from the manufacturer; CyanogenMod is most widely used
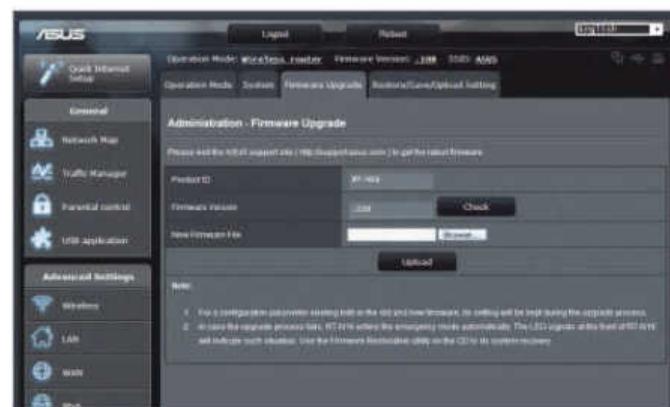
ASUS routers will usually prompt you when they have new firmware updates, it is recommended to update to the latest firmware for the best performance and security

network device with third party software, such as Tomato Firmware, RouterOS, OpenWRT and DD-WRT.

You will see in part that OpenWRT is a simple web interface for the command lines of the Linux system, but the basic functions can be installed easily. Tinkerers can install almost any Linux software. DD-WRT is by and large somewhat easier to operate

A variety of apps for NAS

The network drives of both NAS specialists, Synology and Qnap, act as a PC with respect to updates – their operating system must be kept up to date for reasons of security and performance. However, there are exciting new features that can be installed later as apps. You should update the operating system as well as the apps at least every one or two months. This works similarly with both manufacturers: start system updates as an administrator on the NAS web interface in the control panel under "Update &restore" (Synology) or "System settings > Firmware update" (Qnap). In both cases, you can and should enable automatic updates, so that you don't have to wait for the several-minutes-long process every time. In order to install or update apps, start the "Package centre" (Synology) or "App centre" (Qnap). Both applications work like the Android or iOS app stores.Through a keyword search or categories, you can find applications that you can install with a single click. Included are complete content management systems for websites, as well as multimedia extensions for updating, for instance, the NAS using a video recorder DVB stick. You can update already-installed apps in both systems in the view "Update", either individually or all at once.

Performance gain for SSDs

The controller is an integral component of an SSD and is vital for the performance and data security of the device. It is a small computer whose firmware can also be updated. And in the case of SSDs, this is occasionally absolutely necessary.

In autumn 2014, it came to light that the popular Samsung SSDs belonging to the 840 Evo series could read files that hadn't been used in a long time, with less than a tenth of the original speed. Samsung has solved this problem by means of a firmware update, which can be installed via the PC software, "Samsung Magician".

Since such firmware bugs can appear in any SSD, we recommend all SSD users to install the relevant manufacturer software and use their update features or search for performance and security-related updates every now and then in the support section of the manufacturer's website.

For the sake of security, take every SSD-firmware update as an opportunity to save system image on another drive beforehand (e.g. via the Windows backup). Because if something goes awry during the update – e.g. the power fails –the entire SSD can be deleted.

HDR image on television

If you use your TV only to watch TV and everything works as it should, the latest software version isn't usually needed. But sometimes, the manufacturers upgrade features that are commonly used. For instance, around two years ago, Sony updated the HDMI 1.4a interface of a few models to HDMI 2.0 – or has recently now
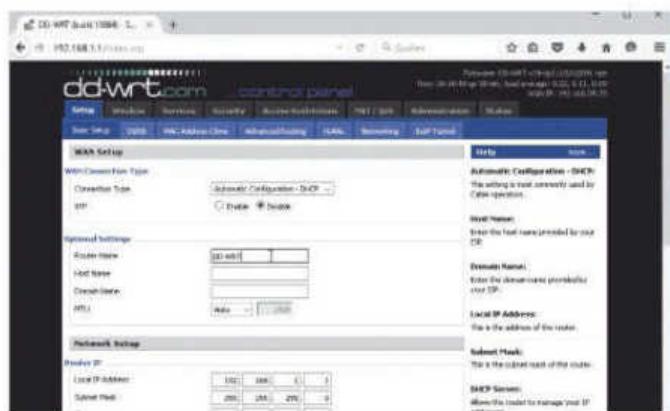
If your router manufacturer doesn't provide any more updates, there are open-source alternatives such as DD-WRT, which aren't affected by security gaps like NetUSB is
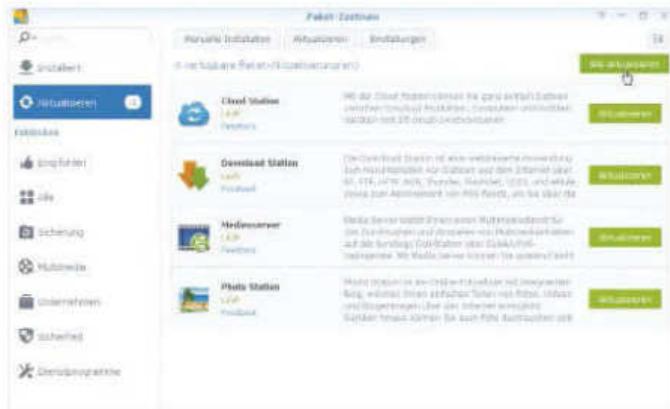
In NAS hard drives, new features can be updated as apps, Synology and Qnap offer proper app stores with a wide selection of software
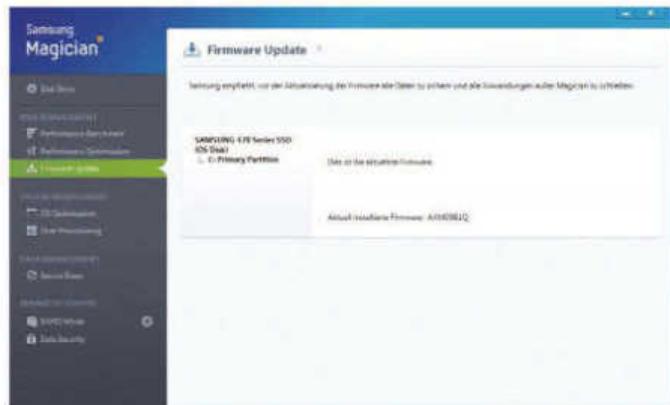
You can use the tools provided by the manufacturer, e.g. Samsung Magician, to keep the firmware on the SSD up to date, which is important for performance and stability

additionally provided the HDR mode in 4K televisions for balanced contrast. Information about such updates is mostly deeply hidden in the support web pages of the manufacturer, with the result that searching for it is worth it only if you absolutely feel the need for the feature. In order to look for updates on a device, the best thing to do is to connect it to your home network via a LAN cable and initiate the update search in the Settings menu under »System« (or similar). The most important are regular updates if you use the smart TV features a lot, in order to watch streaming services such as Netflix, for example, directly on the television. Like apps on the smartphone, you must update these applications separately from the operating system –for Samsung TVs, for instance, via the smart TV platform "Smart Hub".

Play the latest films

Firmware updates are compulsory for Blu-ray players if they don't play certain Blu-rays – some manufacturers thus download the software needed for playing newer discs. The easiest way to do this is via the Settings menu if the player is integrated into the home network. Google's Chromecast automatically downloads updates and installs it by itself – in any case, the basic features are included in the smartphone or tablet apps, which stream to Chromecast. With Apple TV, you will have to manually look for updates, specifically under "Settings > General > Update software". But there hasn't been much that's new here besides the general performance and stability improvements.

Firmware hacks for digital cameras

Of all the gadgets mentioned here, updates for digital cameras are the rarest – and if there are, they are available for high-end compact cameras or system cameras.   A new firmware usually rectifies errors or ensures compatibility with new lenses. An update is seldom accompanied by real new features – Olympus has added among other things a focus bracketing mode for its system cameras, E-M1 and E-M5; this mode enables better close-ups. You can find updates as well as instructions in the support section of the website of your camera brand. For some Canon mirror reflex models, you will find an open-source software on the website www.magiclantern.fm, which you can extract to the memory card in order to unlock additional functions – e.g. to record videos with a higher quality. If you delete the software from the card, the camera will be restored to its factory state.

New font for the Kindle

The range of features of electronic book readers is deliberately downscaled to prevent it from deviating from its actual job. Accordingly, updates are infrequent; if you can't detect any malfunctions, you don't really need the latest software status. For newer Amazon Kindle readers, an update, for instance, upgrades the new font, Bookerly, optimised for e-book readers. This is done on Amazon Kindle and tolino shine without your help. Readers of Pocketbook should look for updates in its menu manually under "Settings > Software > Software update", and Kobo readers receive firmware and app updates upon synchronizing with the PC software, Kobo Desktop.

If you use your TV as a smart TV, the apps should be kept up to date via the Samsung Smart Hub. If you just want to watch TV, you can usually do without updates

The range of features of the Canon single-lens reflex cameras can be expanded by the open-source software, Magic Lantern. In case of doubt, it can be removed without a trace
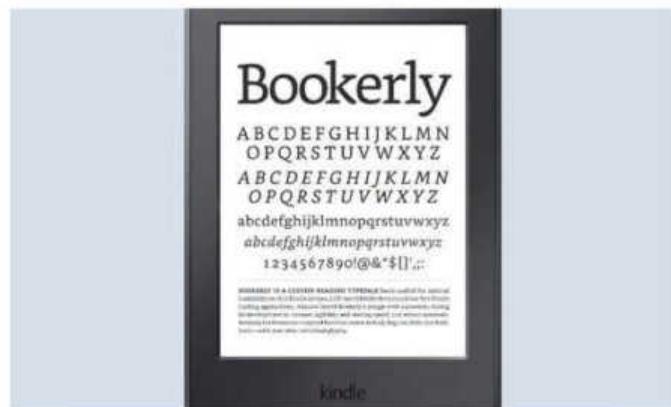
Amazon has upgraded its Kindle e-book readers' new font, "Bookerly", optimised for readers. Apart from that, you don't really need the latest software

Instant Messenger ICQ
Market launch: November 1996
Founder: Mirabilis (Israel), incl. Yair Goldfinger (photo)
Current owner: Mail.ru
Active users: 11 million

1998
AOL Messenger
To this day, AOL holds a patent
for instant messaging

1990	1991	1992	1993	1994	1995	1996	1997	1998

470 million users
The official number of users,
also including the earlier
users –since an ICQ account
can't be deleted

CHIP TIMELINE
ICQ: The Mother Of All Messengers

"Uh-oh"- the iconic ICQ tone still rings in the ears of internet nostalgics. Today, the world's first internet messenger is fighting to survive

In the mid-nineties, when the internet connection was billed to the exact minute, and e-mail and SMS were the most modern means of communication, the ICQ messenger started a revolution. Providing a quick, easy way to exchange messages on the PC. When it was at its peak, more than 100 million people around the world were chatting on ICQ.

Internet pioneers were fascinated by Messenger with its colourful flower in the logo and some still remember their ICQ

2000
Jabber Protocol
Several messengers are based on this open standard

2003
Myspace
One of the first social networks with an integrated message feature

2011
Snapchat
What's special: the pictures received are deleted in just a few seconds

2016
Skype in Windows 10
Microsoft's messenger will be integrated in Windows 10

1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016

1999
MSN Messenger
ICQ's Microsoft rival goes live

2009
WhatsApp
The undisputed market leader now belongs to Facebook

2011
Facebook Messenger
The web chat integrated in Facebook comes out as a mobile app in 2011

number (UIN). The UIN was treated as the user's own telephone number – six-digit UINs are now a true rarity: they are auctioned on eBay for several hundred euros. The UIN was important mainly because users could find their friends only through this sequence of numbers.

The standard option of browsing through contact lists wasn't available then. But it was also precisely this kind of networking that made the atmosphere on ICQ so intimate.

Only two years after its release, ICQ (which stands for: 'I seek you") was bought over by AOL for 407 million US dollars. The Israeli founder was seen as a hero in his

home country. His success was representative of the infinite possibilities for creative start-ups.

"We had no business plan and no funding. We were just a group of people who wanted to do something new – and this gave birth to ICQ," reminisces the co-founder, Yair Goldfinger.

But the success was not of a lasting one. The founders and later owners missed the next revolution, the leap into the mobile web. The missing mobile optimisation and the competition by social networks with chat functions led to an enormous dwindling in the number of users. In 2010, AOL sold ICQ, which was now on its knees, to the Russian

investment group, Digital Sky Technologies, for only 187.5 million dollars. The new owner, now known as Mail.ru brought the crisis-hit ICQ its long overdue app for all important mobile systems. This even gave ICQ a comeback at the Football World Cup of 2014 in South America. The Messenger, still used there, shot right to the top in the app charts. But its time is gone. Only 11 million people still use ICQ today, out of which 6.7 million are in Russia. Compared to the over 500 million users who access WhatsApp every month, which is an astonishingly low number.

Software Made In Germany

When talking about German software, one thinks about companies like Avira, G Data or Magix. However, there are other companies that make billions of Euros here. These are companies that you seldom hear about, because their software caters to special niche domains such as pharmacies or architecture offices. In this regard, German software products are a big hit when it comes to exports. SAP leads the revenue table by a wide margin. In the year 2014, the company gained a turnover of 17.5 billion euros, of which only 14.63 percent came from Germany. SAP makes a lion's share of its money overseas, just like the other companies in our top 5 list, as software made in Germany' enjoys a wonderful status in foreign countries. What's surprising is that software and IT companies have it harder in Germany than elsewhere. When it comes to the founding of new companies, they suffer from a lack of venture capital and an excessive amount of regulation, which affects their numbers. In 2014, the global IT sector had a turnover of three billion euros, and the growth in the sector amounted to four percent. The German IT sector attained a turnover of 153 billion euros, with a growth rate of just 1.5 percent.

Top 5 German Apps

German app and software developers launch their apps internationally, but not a single German app was in the worldwide top 10 list in 2014. The following are some of the most successful German apps:

Lovoo: The dating app with a 'GPS' function has 38 million users.

Babbel: The language trainer from Berlin is downloaded up to 100,000 times a day.

Freeletics: More than 3.0 million users exercise using the fitness app from Munich.

djay 2: 15 15 million DJs use the highest-selling DJ-app for iOS. Origin: Berlin.

Outbank: With over 2.0 million users, it's one of Germany's most widely-used banking apps.

Software AG

Products	Analysis and management software for business processes, management of IT infrastructure
Employees	4,400
Total turnover – 2014	858 million euros
From exports	737.8 million euros

CompuGroup Medical AG (CGM)

Products	Software for medical practices, pharmacies and hospitals
Employees	4,300
Total turnover – 2014	515.1 million euros
From exports	270 million euros

SAP

Products	Solutions for implementation of business processes in companies
Employees	75,600
Total turnover – 2014	17.5 billion euros
From exports	15 billion euros

ILLUSTRATION: ISTOCKPHOTO7 POP_JOP (KARTE)

SCHLESWIG-
HOLSTEIN

WESTERN POMERANIA

HAMBURG

BREMEN

LOWER SAXONY

BERLIN

BRANDENBURG

NORTH RHINE-
WESTPHALIA

SAXONY-
ANHALT

SAXONY

THURINGIA

HESSEN

Koblenz

RHINELAND-
PALATINATE

Darmstadt

SAARLAND

Nuremberg

Walldorf

BAYERN

BADEN-
WÜRTTEMBERG

Munich

Datev eG

Products	Software for tax advisers, auditors and attorneys
Employees	6,800
Total turnover – 2014	843.5 million euros
From exports	10.6 million euros (foreign subsidiaries)

Nemetschek AG

Products	Special software for architects, engineers and the construction industry
Employees	1,600
Total turnover – 2014	218.5 million euros
From exports	131.5 million euros

CHIP

JAN 2015
181 mil.

JAN 2014
121 mil.

JAN 2013
54 mil.

JAN 2012
39 mil.

ASUS Launches The ZenFone Zoom

Usage of ad blockers increases steeply

In January 2015, 181 million users throughout the world used an ad-blocker – 77 million of them were in Europe

HTC One A9 im Test: Vorne Galaxy, hinten iPhone

The Blocked Web

Online advertisements are very irritating – But they finance a large part of the internet. The war that has now broken out over them could change the web for ever By Benjamin Hartlmaier

Online advertising is the economic engine of the internet, but a curse for many users: Without advertising, there would be no free products or free news reports. Facebook, Twitter and Google services (including Gmail and YouTube) would have been out of the picture, too. On the other hand, online advertising has enormous disadvantages: It slows down websites, because several advertising servers are addressed and loaded in the background when the website is called up. It causes additional traffic, which often eats up the bandwidth, with mobile devices being hit hard in particular. Online advertising also represents a security risk: At the beginning of November 2015, unknown persons hijacked the advertising network of the company PageFair, and infected up to 3,000 websites with drive-by-downloads containing Windows malware.

As if that wasn't enough, the flashy banners, automatic audio and video advertisements and advertising overlays that appear on sites are so intrusive that users often have a hard time finding the actual contents. Thanks to this, users throughout the world are increasingly relying on advertising blockers, or adblockers. And their numbers are rising very rapidly: According to a study conducted by Adobe and the anti-Adblock company PageFair, about 198 million surfers

throughout the world were using advertising blockers in June 2015 – That represents an increase of more than 40 percent within a year.

At the global level, the advertising revenue that has been blocked by advertising blockers is estimated to be as high as about 22 billion US dollars – And that's just for the first half of 2015. This is a magnitude that puts commercial publishing-related offers under a particularly large amount of pressure. The situation is made even worse by the fact that browsers such as Firefox firmly integrate ad-blocking tools.

War over ad-blockers

In Germany, a veritable war has flared up over advertising blockers. The primary front involves a battle between the Springer publishing house and Eyeo GmbH, which makes the popular Adblock Plus add-on. After repeatedly making unsuccessful attempts to get the software banned by a court, Springer unceremoniously sealed off its website from users who were using an ad blocker – This happened in the middle of October 2015. A YouTube user who posted a video explaining how to circumvent the blockage received a warning from Springer's lawyers. Filter lists that made it possible for users to circumvent the blockage popped up in the corporate blog of Eyeo

GmbH, and the company received a judicial decree. Regardless of whether Springer continues to proceed against all those who wish to 'improperly circumvent' the blockage, or whether it's just a case of empty sabre-rattling, one thing is crystal clear:

Most ad blocker users will not be dissuaded from using such tools. The wide range of tools that is available covers everything from classical ad blockers to tracking blockers and script blockers.

The advertising blocker as an advertising marketer

The group of classic advertising blockers includes the tool that has been targeted by Springer, i.e. Adblock Plus (ABP). The principle behind ABP is quite simple: The add-on prevents the browser in which it has been installed from loading content associated with known web servers. This way, it makes use of filter lists containing the names of these servers. The most famous of these lists is the EasyList, which is activated automatically during installation. The filter settings can be used to subscribe to additional lists or create separate filters.

This may surprise several users of ABP: The operator of ABP is an advertising marketer. Advertisements that are considered to be unobtrusive by Eyeo GmbH are collected in a white list and passed through in spite of the activated blocker. Publishing houses and advertising networks that want to be included in the white list don't just have to fulfil the criteria associated with the 'Acceptable Ads' campaign; they also have to pay for inclusion. Those who do not want to see any advertisements at all can either use the filter settings to deactivate the option for displaying unobtrusive advertisements, or use uBlock Origin, which is an alternative to ABP. For the most part, this ad blocker uses the same filter lists as ABP, but it does not offer the paid white-listing facility.

No snooping, no advertisements

The second category includes tracking blockers such as Ghostery, Privacy Badger and eBlocker. The primary goal of these tools is not to block advertisements; rather, to block snooping tools such as cookies and social media buttons. However, online advertisers use

Advertisements in spite of ad blockers

The operators of the popular Adblock Plus tool want to use their 'Acceptable Ads' initiative to permit unobtrusive advertisements. Consequently, those who use the tool see advertisements containing text and pictures even when the ad blocker is active – but no blinking banners.
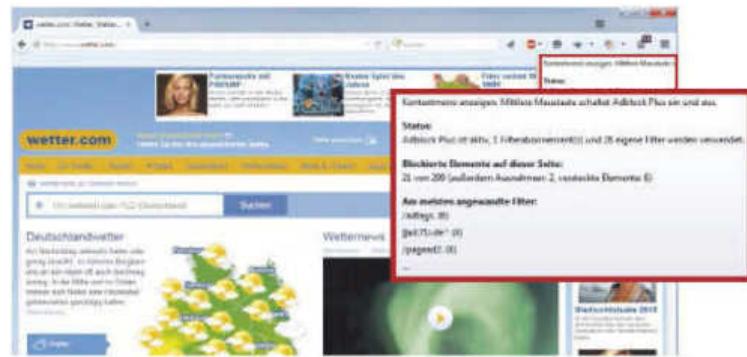

Using tracking protection as an ad blocker
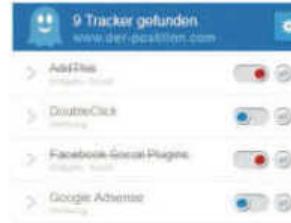
Tools such as the Ghostery add-on make it possible to block tracking cookies in a targeted manner; this also gets rid of many advertisements.

Fine-tuning for script blockers

In addition to Flash advertisement banners, NoScript also blocks videos. Those who wish to view such items must deactivate the tool in a targeted manner.
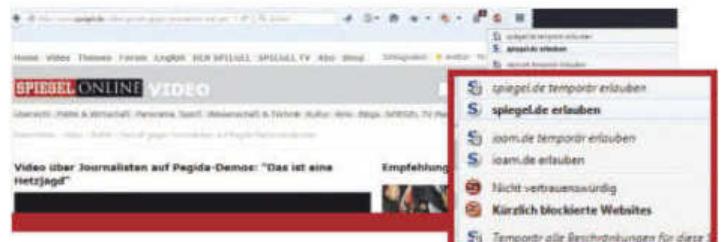
Comparing ad blockers

	Add-on	ADVERTISING BLOCKERS		TRACKING BLOCKERS		SCRIPT BLOCKERS	
		Adblock Plus	uBlock Origin	Ghostery	Privacy Badger	NoScript	ScriptSafe
Function	Blocking pop-ups	■	■		□	■	■
	Blocking video advertisements	■	■	Partial	Partial 2)	■ 3)	■ 3)
	Blocking harmless advertisements	After activation	■		Partial 2)	■ 4)	■ 4)
	Blocking tracking tools	■	Additional filter list required	■	■	■ 5)	■
	Blocking social buttons	Additional filter list required	□	■	■	■	■
	Blocking Flash contents	Additional filter list required	□	□	□	■	■
	Configuration options	Personal filter and white lists etc.	Personal filter and white lists etc.	Targeted blocking of trackers and cookies	Targeted blocking of trackers and cookies	Targeted blocking of individual elements etc.	Targeted blocking of individual elements etc.
Browser	Chrome	■	■	■	■	□	■
	Firefox	■	■	■	■	■	□
	Internet Explorer/Edge	■ / □	□ / □	■ / □	□ / □	□ / □	□ / □
	Opera	■	■ 1)	■	□	□	□
	Safari	■	□	■	□	□	□
	Android	Adblock Browser/Firefox Add-on	Firefox Add-on	Ghostery Privacy Browser/Firefox Add-on	□	□	□
	iOS	Adblock Plus/Adblock Browser	□		□	□	□

1) OFFERED AS µBLOCK IN THE OPERA STORE   2) ONLY WHEN ADVERTISEMENT IS LINKED TO THE TRACKING TOOL   3) BLOCKS ALL VIDEO CONTENTS BY DEFAULT
4) IF DELIVERED THROUGH A BLOCKED SCRIPT   5) IF THEY USE BLOCKED SCRIPTS

these very things to record the users' surfing behaviour, in order to be able to display personalised advertisements across a variety of sites. Consequently, the blocking of tracking mechanisms frequently leads to a situation in which advertisements are also blocked. However, Ghostery and ABP share a similar disadvantage: When the tool is being set up, a window with the title "Help Ghostery remain free" pops up. If you click the "Yes! I want to participate" button, Ghostery will collect the detected cookie data.

This data is then sold to advertising firms in an anonymised form, so that the advertising firms can optimise their advertising efforts. Even in this case, you can either deactivate the collection option or use an alternative tool such as Privacy Badger. This add-on functions like Ghostery, but it was developed by the Electronic Frontier Foundation, which is an American non-government organisation that fights for basic digital rights.

Unlike classical advertising and tracking blockers, script blockers such as NoScript suppress insecure web technologies such as Flash or Java, in order to protect the user from malicious drive-by-downloads. Some advertisements such as blinking Flash banners are also removed this way. The disadvantage: Media such as videos also disappear. With this in mind, script blockers require a certain amount of fine-tuning.

Advertising blockers are changing the web

The fact that there are legitimate reasons for blocking advertisements has also been recognised by the advertising industry itself: "We botched it up", wrote Scott Cunningham in a blog entry about the current condition of online advertising. In his capacity as the technology chief of the international online advertising association IAB, he is consequently calling for a programme that is supposed to make online advertisements more secure, more unobtrusive, less data-intensive and more adjustable. The goal is to use better advertisements to lower the quote of ad blockers.

While the IAB is still thinking about binding guidelines, publishing companies are already responding to ad blockers with very concrete measures.

In addition to the publishing houses, advertising marketers such as Google and Facebook are also tackling the problems associated with online advertisements. Advertisements that are displayed through the Google advertising network can be made to disappear via a little cross in the advertisement (see right). This is supposed to prevent the user from feeling like he is at the mercy of the advertisement, while simultaneously making the advertisement more relevant. With the so-called 'Instant Articles', Facebook aims to solve the problem of long loading times and additional traffic, which can be particularly frustrating if the scenario involves a smartphone. Instant Articles are articles that appear directly in the Facebook app, instead of appearing on the sites of the publishing houses. Under this scenario, the advertisements don't just get loaded quicker; they cannot be blocked, either. Apple (the manufacturer of the iPhone) offers a similar programme called 'Apple News', but this programme is currently only available in the USA.

"The rise of advertising blockers represents a danger for the internet, and could drive users into a world of closed platforms, which would be ruled by a handful of companies", explains Mr Cunningham of IAB. Consequently, the issue of the direction in which the web is going to evolve also depends on the number of users who are going to block advertisements in the future, and the extent to

Geo.de locks out ad blockers

No entry with advertising blockers: Articles on Geo.de can only be accessed by paying, or free, along with advertisements.


Advertisements that are invisible to ad blockers

As a reaction to the ad blocker trend, many portal operators are positioning advertisements such that they cannot be detected automatically.
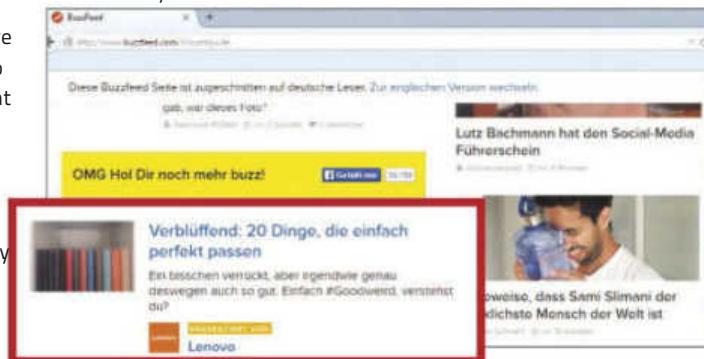
Google advertisements with closure buttons

Advertisements displayed by Google can be closed temporarily by clicking the cross **1** and selecting an option **2**.
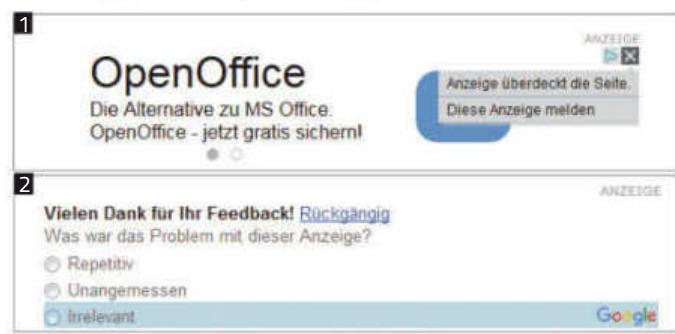
Articles only on Facebook?

Short loading times for articles and no chance at all for ad blockers: This is what is promised by Facebook's Instant Articles, which have been displayed in the iOS app since October. Instant Articles are supposed to become available on the Android app at the end of 2015

know the future

COVER STORY
Our main feature of the month which gives an in-depth coverage of today's most exciting technological issues and trends

REVIEWS
Professionally conducted and in-depth in nature, our product write-ups are the only reviews you can trust

CHIP DOWNLOADS
Contains all the useful tools and essential applications everyone will ever need

FEATURES
Incredibly useful and informative feature articles give you the lowdown on the latest IT and technology trends

PRACTICE & TIPS & TRICKS
Our handy guide provides you with the application know-how to further enhance your IT experiences

LITE & LEISURE
Think, Touch, Read, Watch and Play on the lighter side of IT

CHIP
MALAYSIA
www.chip.com.my
internationally trusted technology magazine

Firmware Updates
CES 2016
LegalTech: E-Signature

A Glimpse Into The Technology Of 2016

A sneak-peek into the technology of tomorrow, today

REVIEWS: MSI GT72S 6QE Dominator Pro G, GIGABYTE P34Wv5, ASUS Maximus VIII Formula, Sony Xperia Z5 Premium, Microsoft Surface Pro 4

ISSN 1673-0322

read CHIP

The first word on how technology is changing our world. With professional analysis, latest reports, and informative guides, CHIP remains reputed as the *internationally trusted technology magazine*

CHIP
MALAYSIA
www.chip.com.my
internationally trusted technology magazine

To Subscribe or Advertise:
Call 603 7727 6554 or log on to **www.chip.com.my**
facebook CHIP Malaysia   **twitter** @CHIPMY

A Glimpse Into The Technology Of

2016

8K TVs, superfast hard drives, electronic SIM cards and a doctor in your ear: We will show you how the world of technology will develop this year By Christoph Sackmann

Super Fast 3D Memory

The most exciting innovation for notebooks, PCs and mobile devices next year is called 3D XPoint, pronounced "Three D cross point". It is based on a technology designed by Intel and the memory manufacturer, Micron. This technology makes hard drives 1,000 times faster and 1,000 times more durable than the current SSDs. Even HP and SanDisk are making headways with a similar technology. Their memory miracle is called Storage Class Memory, or simply SCM.

A Mix Of SSD And RAM

3D XPoint and SCM are a mix of NAND flash memory used in SSDs and the faster, but volatile DRAM. It responds within nanoseconds and is thus more than 1,000 times faster than the NAND memory. However, it can't store data without a constant current supply or be manufactured with a high storage density. With 3D XPoint, Intel and Micron have now built the memory as a narrow, three-dimensional checkerboard – in any number of layers, theoretically speaking. Future hard drives can be shrunk to the size of today's RAM sticks – while future RAM sticks will have the capacity of today's SSDs. Horizontal lines supply the current and signal, and data is stored in the vertically arranged memory cells. Since the memory is not volatile like DRAM is, every selector does not need its own transistor, which saves space. The arrangement also enables extremely shortened access times compared to NAND memories: these are said to lie in the two-digit nanosecond range. This would be twice as long as with the DRAM, but a thousand times faster than the NAND memory.

RAM Stick With 160 GB

The increased storage density also allows extremely small hard drives. The same amount of space can apparently store ten times more data than the DRAM can. This means that a RAM stick could have 320 GB instead of only 32 GB of memory. Intel and Micron have not yet given any information on 2.5-inch hard drives. While HP and SanDisk are silent on the technical details of SCM, they promise the same results in terms of speed and durability as their competitors' product.

Intel has already supplied trial samples of 3D XPoint to partner firms. These will probably display the first products in 2016, perhaps first for the server sector. Hard drives for consumers, though, are expected to follow quickly.

1 3D XP shrinks the memory. At the same time, the capacity increases.

3 3D XP may be a little slower than the RAM, but beats hard drives and even SSDs by a wide margin.

	Nanosec.	Microsec	Millisec.
DRAM			
3D XPoint			
NAND			
Hard drive			

faster ⟶ slower ⟶

2 3D XP is built as a three-dimensional grid. Memory cells are arranged vertically and operated via selectors. The current flows horizontally.

Selector
Memory cell

Current flow

The Next CPU Generation

Intel is already planning the next generation of CPUs for 2016. Kaby Lake which supports 4K streaming, USB 3.1 and the 3D XPoint memory described on the left, but it won't be the same performance leap as Skylake is. It is expected to come out with the Cannonlake generation only in 2017.
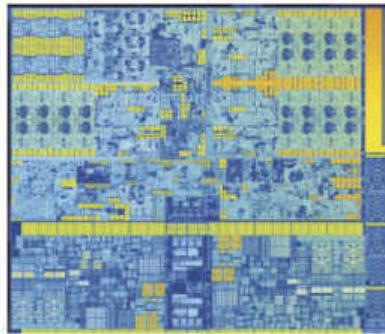
Major Windows 10 update

As we know, there won't be a Windows 11, but the first major Windows 10 update is on the agenda for the summer of 2016 – the working title: Redstone. It includes an enhanced Continuum feature with which the user can switch Windows 10 devices seamlessly and carry on with his work directly thanks to the synchronisation.

Gaming Notebooks

Notebook manufacturers are pinning their hopes on gamers: they are their favourite customers since they buy expensive laptops and exchange them for new devices much faster than other notebook users do. That's why 2016 awaits a whole glut of gaming devices. Even gaming smartphones and tablets have been planned, for example, by Acer.

collapsed

FIG. 1

1

Hinges transmit current and data

FIG. 2

2

The Flip Phone Makes A Return

Bigger, sharper, bulkier: smartphones displays are going to grow unstoppably even in 2016. The huge diagonals of high-end devices are now standard, with 6-inch displays on the rise. There is a special demand for huge phablets in the massive Chinese market. Around 40 percent of the smartphones recently sold here are giant phones. Commuters in particular love the phablets as a replacement for laptops. With 6-inch screens, 4K resolutions are also possible in theory, without overstraining the eyes. But the more a smartphone display grows, the bulkier becomes the device and it becomes that much more impractical it becomes to keep in your pocket.

Foldable Displays

Manufacturers have been tinkering with flexible smartphones. This won't be a reality in 2016, but Samsung and LG are at least very close to making foldable displays a reality. This would revive the good old flip phone, but only with a big display. LG has already revealed rollable displays as prototypes for tablets and televisions. Since the rest of the technology, i.e. battery, processor, antenna and other modules remain fixed, a hinge must be fitted behind the display, by means of which the upper and lower parts of the smartphone are connected to each other. Such hinges are already present today in convertible notebooks, in which the monitor can be turned downwards by 360 degrees. Mobile World Congress in Barcelona will likely reveal whether it will actually be able to bring the folding technology in the market or only in a few prototypes in 2016. Samsung and LG may present their Galaxy S7 and G5 respectively there as well.

Force Touch for all

It isn't unlikely, then, that the two Android devices are also equipped with Force Touch, i.e. a pressure-sensitive display, like the "3DTouch" Apple is marketing on the iPhone 6. The Huawei Mate S is the first Android device with this technology, where a firmer press on the display initiates different functions from those initiated upon a lighter press. Huawei's smartphone display even functions as a weighing scale. The Chinese manufacturer has already announced Force Touch for its future models. Android, by the way, has had the support for this since version 2.0 (which came out in 2009), but no manufacturer so far has used it consistently.

Pay with NFC

Apple Pay, Android Pay, Samsung Pay – paying with NFC smartphones is in. MasterCard is currently working on a technology for NFG integration with which any household item can be turned into a credit card - from a car key to a bracelet.


Mobile network with 4.5G

LTE is the fourth generation of mobile communications transmission and is therefore also called 4G. We'll have to wait till 2020 for 5G, but Huawei is introducing an intermediate level in 2016: 4.5G with 1GBit/s. New smartphone wireless modules are needed for this, but cell towers only need a software update.

Electronic SIM cards

Even though SIM cards are technologically outdated, providers are still holding on to them. A major manufacturer alliance including Apple and Samsung now wants to replace the old SIM with a permanently built-in eSim. The good: changing providers and tariffs will be easier. The bad: an e-SIM can't be swapped between multiple devices.

Sharper Than Real Life

Most people in Malaysia don't even have a 4K TV at home, and there aren't even enough films and series in this resolution. And yet, TV manufacturers are already going one step further. A number of 8K televisions are entering the marketing no later than at the time of the 2016 Olympics in Rio de Janeiro. 8K is 7640 x 4320 pixels, four times more than 4K, and sixteen times more than full HD. The first displays are already available at Sharp, and the Chinese manufacturer Hisense is planning 8K televisions for the 2016 Christmas sales.

Televisions From 85 Inches Onwards

Showing so many pixels to good advantage requires a decent amount of space because of the 200 dpi pixel density, which an 8K TV would have at 40 inches, is far beyond the perception threshold at a normal viewing distance. Which is why 8K TVs are once again going to be considerably bigger than the latest gadgets. The first 8K devices will be at least 85 inches large – that is, 2.16 metres diagonally. This number, however, is also this high because manufacturers will first launch their flagship models, which are supposed to score points not only with their sharpness, but also with their size.

As soon as 8K has spread a bit, the TV sizes will also shrink, but will still be considerably bigger than 4K televisions.

The 8K Television Project

With this, TV viewers are going to surge ahead of the television. The Japanese broadcaster, NHK, intends to broadcast the 2020 Olympic Games in Tokyo in ultra HD resolution, and thanks to 5G mobile telephony, on the smartphone as well. A trial run is expected to start as early as next year. For this, NHK is filming some of its shows with specially developed 8K cameras, which incidentally now also weigh an acceptable two kilograms. Meanwhile, the rest of the world is still waiting for widely-available 4K content. It won't be available on Malaysia's terrestrial TV even in s2016.

New connection for 8K

Something different on the internet: Netflix, for instance, is going to show the 2016 season of House of Cards in a 4K resolution again. There are no computer monitors for 8K with video-on-demand services. But thanks to the upcoming DisplayPort standard eDP 1.4a, these will be at least technically possible from next year onwards.

8K
7.680 x 4.320 px
from 85 inches

4K
3.840 x 2.160 px
from 40 inches

Full HD
1.920 x 1.080 px
from 32 inches

8K ULTRA HD TV 98"

Times Full HD Resolution (120H)

A TV that can be rolled

Thinner and lighter also works for televisions: LG Display is working on a TV set whose 55-inch display is only one millimetre thick and is completely rollable. It can be attached to the wall on a magnetic mat, which is also portable and at 1.9 kilograms, very light. LG has invested a billion dollars in a new factory for the production.

TV streaming

2015 was characterised by music streaming, and even Apple, with Apple Music, was a part of this. For 2016, the tech groups are taking on the TV market: TV streaming services are expected to give first Netflix and second, cable providers, competition. Moreover, they are offering useful contents for set-top boxes such as Apple TV and Amazon's Fire TV.
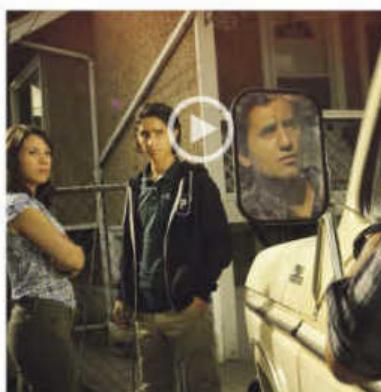
Buy groceries online

Malaysians have begun to buy a lot of electronics, clothes, and books online – then why not groceries too? Up until now, storage and delivery were a problem, but now, some providers are entering the market. Tesco now has an online shop and delivers in and around the Klang Valley. Startups like Food Panda and HappyFresh meanwhile delivers food boxes and groceries as well.

Studies have also shown that the online marketplace will only grow bigger, with businesses new and old going online to capture this as-of-yet unsaturated market.

Amazon is never far from a source where so much money can be earned. Its service "Pantry", however, has only delivered non-perishable products, detergents, and pet food up until now, and besides, a prime subscription is required. "Amazon Fresh" will deliver fresh products; although no news on whether or not this service will be made available in Malaysia.

Malaysia has quite a number of online grocery stores that delivers around the Klang Valley area. Some of the more reputable ones include HappyFresh, Tesco Online and Green Chicken

Cheaper phone call rates

The roaming fees for mobile phone use in other EU countries will be restricted from 30th April 2016 onwards: providers may then add a maximum of 5 cents per minute, for SMS, 2 cents and 5 cents for a megabyte. Will this catch on in the Asia region? Maybe, or maybe not, but with the lowering cost of telecommunications, it might not be that farfetched to hope for reduced rates.

Even more surveillance on the internet

The German Bundestag passed a data retention law in October, but it's going to be a while before it is actually implemented: providers have until autumn 2016 to create the technical prerequisites and clarify the content-related details with the Federal Network Agency. The constitutional court may topple over the law again by then.

Digital fitness gadgets

No tech gadget is closer to your body than a wearable – and now manufacturers are planning to arrange comprehensive applications and have their data. Gone are the days when smartwatches and wristbands only measured the pulse. The new generation of wearables can do much more: the Health Watch by Philips, for instance, from April 2016 onwards, will know whether you're sitting, standing or sleeping, how much you exercise and how your body reacts to these activities. The highlight: the watch is integrated into the Cloud system HealthSuite, which brings together data from other sources such as blood pressure monitors. If you want, you can then partially or completely share this information with your doctors or psychiatrists.

The smartwatch, Blocks, is a little less savvy, and just collected millions of dollars in the USA on crowd-funding website Kickstarter. It has a modular design and also modules that measure stress and oxygen content in the blood or even prepare an ECG.

A fever thermometer in your ear

The most successful European crowdfunding campaign, Bragi, is going to launch its smart earphone, The Dash in 2016. While it is designed primarily as a music and fitness device, it also measures the pulse, body temperature and oxygen saturation of the blood. Furthermore, it contains features that help the hearing impaired like a hearing aid does, by amplifying certain sounds.

TEST LAB: The Tools

Here at the CHIP Test Labs, we adhere to the high requirements set by the CHIP International Testcenter standards. This means that everything here -- from our own personal knowledge and to our trusted tools of the trade -- are meant to provide the most optimised, unbiased and comprehensive review to every product that comes through our doors. As thus, our test bed tools are specifically picked to get the most out of every test we perform

Intel Platform

Motherboards
Intel DZ77GA-70K
MSI Z87 MPower

Processors
Intel Core i7-3770K
Intel Core i7-4770K

Graphics Processing Unit
MSI GeForce GTX 980
GAMING 4G

CPU Cooler
Master X6

AMD Platform

Motherboards
ASUS Crosshair V
ASUS A88X-Pro

Processors
AMD FX-8150
AMD A8-3850

Graphics Processing Unit
ASUS Radeon R9 290X

CPU Cooler
Cooler Master Hyper 212
EVO

PSU, Storage & RAM

Power Supply
Cooler Master Silent Pro
Hybrid (1300W)

Storage
Western Digital Black² Dual
Drive
Western Digital My Book
Live Duo

Memory
Kingston HyperX
KHX1600C9D3K4/16GX
Kingston HyperX FURY
HX318C10FWK2/8
Kingston HyperX Predator
HX430C15PBK4/16

Benchmark Software

Operating System
Windows 7 Ultimate
(64-bit)

Futuremark
PCMark 8
3DMark

Industry Standard Benchmark Tools
AIDA64
SiSoftware SANDRA
Speccy
Unigine Heaven

TEST LAB

CONTENTS

CHIP Awards

CHIP Editors' Choice Award
Awarded to products that receive unanimous endorsement from all CHIP editors for its overall brilliance

CHIP Outstanding Award
Reserved for products that combine astute technical performance with good quality and design

CHIP Recommended Award
Given to products that possess singular quality worthy of a recommendation

Ratings

Each product review is rated on a scale of 1 to 5 for different key parameters:

PERFORMANCE : Refers to the efficiency of execution
FEATURES : Rates the abilities and unique characteristics available
DESIGN : Varies according to product. Finished products - form factor and build quality. Hardware components - layout, size and cooling solution. Software - user interface
VALUE : Calculated from the performance and features of the product in relation to the price

The Alpha Dog

The Maximus VIII Hero Alpha is the world's first Z170 gaming motherboard with integrated RGB headers. Now you no longer need external RGB controllers, just slide a standard 12V RGB strip onto the 4-pin Aura RGB-strip headers and you're set. The motherboard also comes with double backplates which provides additional reinforcement and support for the motherboard. If that wasn't enough, how about lightning-fast storage speed with native M.2/U.2 NVMe PCIe RAID support? Yep the Maximus VIII Hero Alpha has it all to show who's the real alpha dog.

ASUS Maximus VIII Hero Alpha
Contact: Build Technology Supply Sdn Bhd,
Servex(Malaysia) Sdn. Bhd.
Phone: (03) 7955-3699, (03) 8024-6688
Info: www.build.com.my, www.servex.com.my

Slim Shooting

Based on a concept of 'Fundamental Beauty', the EX-TR70 captures the limitless potential of the beauty hidden within all women by bringing out the true essence of beauty in the same way as jewellers bring out the hidden beauty in unpolished gems. The EX-TR70 is truly a beautiful device, with an aluminium outer frame in an ultra-thin shape. It guarantees durability to an extent, and not to mention the smooth and sharp panel and the lens with a mirror-surfaced finish, any fashion conscious person would easily fall in love with this device.

EXILIM EX-TR70
Contact: Casio Malaysia Sdn Bhd
Phone: (03) 2724 1253
Info: www.casio-intl.com/my/en

Aspire to Inspire

The Aspire R 14 is a one of a kind 360-degree dual-torque hinged convertible laptop, that adapts to just about any situation or space. It comes with 802.11a/c wireless networking with MU-MIMO for that huge increase in network performance. It also has USB 3.1 with Type-C connectors for even faster transfer speeds. If you think it's not going to be powerful, think again for it comes with variations which allow for setups ranging from Intel Core i3 processors to Intel Core i7 processors. The laptop just keeps on running, you can keep it on for 8 hours no problem, pretty good if you ask us.

Acer Aspire R 14
Contact: Acer Sales and Services Sdn.Bhd
Phone: 1 800 88 1288
Info: www.acer.com.my

Music To My Ears

Take your music to new places with the brand new Sony WS413 Walkman, with its salt water and dust-proof design. Nothing feels better during an exercise session than listening to your favourite beats and melodies. The WS413 is equipped with every-day earbuds, which are specially designed to be waterproof, using a thin film to form a barrier against water getting through without compromising comfort. A cool feature would be its Ambient Sound mode, where built-in mics pick up ambient sounds and project them through the earbuds so you'll always stay in touch with your surroundings.

Sony WS413 Walkman
Contact: Sony (Malaysia) Sdn Bhd
Phone: 1 300 88 1233
Info: www.sony.com.my

Lemme Take a Selfie

The selfie trend is taking over the world, and now OPPO has jumped on the bandwagon with their OPPO F1 smartphone, designed to be the perfect selfie phone for selfie lovers. With an 8-megapixel front-camera that has a f/2.0 aperture lens, more light can enter the sensor allowing for better pictures even in low-light conditions. But to help fight low-light conditions, the OPPO F1 can use its screen as a flash so your face will always come through bright, clear and natural.

OPPO F1
Contact: OPPO Malaysia
Phone: 1800-88-6776
Info: www.oppo.com/my

Are You The Key Master?

Master your keyboard with the MasterKeys Pro S from Cooler Master. With the MasterKeys Pro S you'll enjoy the brightest LEDs and the most tactile of switches that gamers have come to love. Cooler Master redesigned the interior so it would fit both Cherry MX switches and bigger, brighter LEDs that can radiate up to 16.7 million colours. The MasterKeys S also support on-the-fly macros, profile support, all with an easy to use software.

MasterKeys Pro S
Contact: Ban Leong technologies Sdn Bhd,
Build Technology Supply Sdn Bhd
Phone: (03) 7956 6300, (03) 7955 3699
Info: www.coolermaster.com

Advantage Through Ink

Print more pages for less when you print with the HP Deskjet Ink Advantage 4729. It is equipped with HP's Original HP ink cartridges, which are ultra-high yield and can print thousands of pages. If you wish to print from a device such as a smartphone or tablet, the printer has the capabilities to do so from a variety of devices. HP shows that they can produce outstanding print quality you can count on.

HP Deskjet Ink Advantage 4729 AIO
Contact: Hewlett-Packard (M) Sdn. Bhd.
Phone: 1 800 22 6998
Info: www.hp.com/my

Sharp As A SabreTooth

Just when you thought it'd be hard to hide a computer, The TUF Sabretooth Z170S shows up with its digital arctic-camo PCB. What's so special about this motherboard you ask? The motherboard sports a TUF ICe, a dedicated processor that monitors on-board temperature sensors and fan speeds for ultra-accurate cooling. Bundled with great software like Thermal Radar 2 which works in tandem with the 11 fan connectors found on-board, you can now control your fans wirelessly via smartphone or tablet while monitoring key components in real-time.

ASUS TUF Sabretooth Z170S
Contact: Build Technology Supply Sdn Bhd,
Servex(Malaysia) Sdn. Bhd.
Phone: (03) 2148 1307, (03) 7960 6868, (03) 8070 3633
Info: my.msi.com

Powerhouse Performance

One of the latest addition to GIGABYTE's lineup, the GIGABYTE P57 houses a powerful GTX 970M graphic card and the latest Intel Core i7 Skylake processor. It provides stunning visuals with its 17.3-inch Full-HD IPS display, along with featuring some of the latest hardwares M.2 PCIe Gen3 x4 SSD. The P57 also incorporates an all-new 30-key rollover anti-ghost keyboard to allow multiple key presses to be always reported. Finally, the P57 also provides a flexible storage that allows for a swappable bay for a HDD, for additional storage.

GIGABYTE P57
Contact: TECH ARMORY Sdn Bhd
Phone: (03) 5887 0962
Info: www.techarmory.my

Bigger Yet Smaller

With a footprint smaller than you'd expect from an MFP, the e-STUDIO2802A saves space and can be placed anywhere in a workplace. Using RADF and bypass feed technology, the MFP is capable of printing A3 sized prints despite the size of the MFP. Printing, colour scanning and copying are all standard features on the e-STUDIO2802A, so it's not required to purchase and install separate devices for these tasks. The operating panel is simple and intuitive, allowing for easy management and an experience with no fuss.

Toshiba e-STUDIO2802A
Contact: Toshiba TEC Malaysia Sdn Bhd
Phone: (03) 5568 7606
Info: www.toshibatec.com.my/

Looking Good On The Phone

The honor 5X is definitely one of the best looking devices we've come across. We sometimes talk about inner beauty, this time round the honor 5x has beautiful insides and outsides. An aluminium alloy body finished with a special brushing technique produces the consistent polished finish that one could stare all day at. On the inside we have a Qualcomm 64-bit octa-core processor and 2GB of RAM for a smooth and responsive user experience. And the piece de resistance is its 3-slot sim card bay, allowing for 3 different SIM cards to be used at the same time.

honor 5X
Contact: Huawei Malaysia Mobile Hotline
Phone: 1 800 22 0086
Info: www.vmall.my

Connecting The Important Things

Connect to your surroundings with the Logitech 480, with the ability to connect to up to 3 different devices which can be chosen with a knob. Connect to devices through Bluetooth, control devices from afar such as your TV, or computer and even a tablet and smartphone. The keyboard supports multiple platforms so you don't have to worry if you're a Linux, iOS, Windows or Android user as it will work for all of them. There's also a cradle for your tablet and phone at just the right angle for you to read and type.

Logitech k480
Contact: Ingram Micro Sdn Bhd., MCL Sdn Bhd., M-Link Sdn Bhd., Kaira Technologies Sdn Bhd
Phone: (03) 7955 8188, (03) 8023 3800, (03) 7728 9003, (03) 7955 3669
Info: www.logitech.com/en-my

Say Hello To Windows

Experience the power of Windows 10 on your mobile with 4G LTE connectivity, smooth multitasking, and the all new Microsoft Edge browser. Browse websites and watch videos with its 4.7-inch display and 2100mAh battery which promises you'll have uninterrupted entertainment. In addition, the Lumia 550 comes with the latest version of Office apps like Word, Excel and PowerPoint that have been optimised for mobile use. With Windows 10 on your Lumia 550, you can access OneDrive storage giving you freedom to work whenever and wherever you want.

Lumia 550
Contact: Microsoft Malaysia
Phone: 1800 886 295
Info: www.microsoft.com/en-my/

Wireless Storage On-The-Go

You can now wirelessly access your media straight from your flash drive with the SanDisk Connect Wireless Stick. Imagine watching and streaming your movies and videos straight from your flash drive wirelessly, no need for wires or an internet connection. The SanDisk Connect Wireless Stick can share content with multiple devices at a time, so don't be selfish amongst your friends and share your great moments and music. The SanDisk Connect Wireless Stick comes in a variety of capacities ranging from 16GB to 200GB.

SanDisk Connect Wireless Stick
Contact: Ingram Micro Sdn Bhd, Vector Digital Sdn Bhd
Phone: (03) 7940 8888, (03) 2143 2822
Info: www.sandisk.com

Blowing Air Like An Airbender

Designed for overclockers that demand ultra-low temperatures, aggressive LED lighting, and total control over their hardware, the Cooler Master MasterAir Maker 8 uses a newly patented 3D Vapor Chamber technology that results in superior air cooling and better protects your advanced components from overheating and damage. A total of eight heat pipes conduct heat away from the horizontal base, while an ultra-large heatsink helps further put stop to the heat. The MasterAir Maker 8 is equipped with two high quality Silencio FP fans that propel heat away from the unit, the combination of all these elements make the MasterAir Maker a top choice for system builders.

Cooler Master MasterAir Maker 8
Contact: Ban Leong technologies Sdn Bhd,
Build Technology Supply Sdn Bhd
Phone: (03) 7956 6300, (03) 7955 3699
Info: www.coolermaster.com

Carbon Always Looks Cool

Carbon fiber comes to motherboards on the MSI Z170A GAMING PRO Carbon Edition, sporting the latest Z170 chipset and latest version of Mystic Light. The motherboard is sure to offer outstanding performance and customisation of your system, and experience superfast online gaming with MSI GAMING LAN powered by Intel. Load your games in the blink of an eye with blazing fast Turbo M.2 data transfer speeds of up to 32Gb/s, while Steel Armor ensures that your heavy graphic cards are solid and stable.

MSI Z170A GAMING PRO Carbon Edition
Contact: JW Power Marketing Sdn. Bhd., Mediaforte (Malaysia) Sdn. Bhd., Advancenet Technology Sdn. Bhd.
Phone: (03) 2148 1307, (03) 7960 6868, (03) 8070 3633
Info: my.msi.com

Dominate The Rest

Succeeding the Logitech Proteus Core is the Proteus Spectrum. Retaining the world's best DPI sensor, advanced surface and weight tuning, but now gives you even more features to elevate your game and style. Bring your mouse to life with breathing light patterns, or set your lighting to continuous cycle through the colour spectrum using Logitech Gaming Software. The lighting can also be synced to other Logitech G devices. Personal tweaks make all the difference, for a mouse that feels just right for you, adjust the weight and centre of balance through the placement of up to five 3.6g weights in the mouse.

Logitech G502 Proteus Spectrum
Contact: Ingram Micro Sdn Bhd., MCL Sdn Bhd., M-Link Sdn Bhd., Kaira Technologies Sdn Bhd
Phone: (03) 7955 8188, (03) 8023 3800, (03) 7728 9003, (03) 7955 3669
Info: www.logitech.com/en-my

Immersive Soundscapes For Your Space

Enjoy your music the way you want to with the choice of audio output. You'll be amazed by the two supplied speakers of the CAS-1, featuring Hi-Res Audio compatible 14mm soft dome tweeters as well as a highly-rigid 62mm woofer that is supported by a bass reflex port. Each speaker beautifully recreates a wide range of frequencies while suppressing noise and distortion, even while listening in near-field conditions. The CAS-1 was also designed to allow the highest quality of listening experience even with headphones.

Sony CAS-1
Contact: Sony (Malaysia) Sdn Bhd
Phone: 1 300 88 1233
Info: www.sony.com.my

Acer Predator XB271HU

Price: RM3,299
Contact: Acer Sales and Services Sdn.Bhd
Phone: 1 800 88 1288
Info: www.acer.com.my

Screen: 27-inch Wide Quad HD (2560 x 1440), 100% sRGB colour gamut
Panel: IPS
Response Time: 4ms (Grey to Grey)
Refresh Rate: 144 Hz (165 Hz when overclocked)
Input: HDMI (v1.4), DisplayPort (v1.2), 4 x USB 3.0
Others: Nvidia G-SYNC, Acer GameView
Dimensions: 614 mm x 401-551 mm x 268 mm

Performance:
Features:
Design:
Value:

The Visual Predator

Acer shows that it has great monitors too

By Matthew Yap

When it comes to PC gamers, the demand in quality can sometimes take outrageous directions. The best and the shiniest, in terms of looks or features, are aspects of a product that appeal to gamers young and veteran. It's no surprise that even monitors have premium gaming versions, such as one of Acer's latest – the Acer Predator XB271HU.

The design of the Predator XB271HU provides both aesthetics and function. Its base is a combination of solid steel and hard plastic, which supports a strong stand that allows the screen to tilt, swivel, rotate, and is height adjustable. That many adjustment features make the XB271HU a very flexible monitor. In particular, height adjustment can be very useful as it helps to keep the display at eye level, which is important for maintaining good posture. Installation is easy as well, which is a nice bonus.

The inputs for the monitor are all at the back and facing downwards, with helpful labels indicating what goes where. Here, we found a total of four USB 3.0 ports that can be powered by your PC, as well as a DisplayPort, HDMI port, and an audio in jack. There's no picture-in-picture feature or anything like that, so you can't take advantage of the screen size to display two separate machines, but that's not what the model is made for so that's fine.

Video quality is great all around, as expected of an IPS panel. Colour and brightness levels are great here, especially the former as it has 100 per cent of the sRGB colour gamut. This not only makes your games look more vibrant and colourful, but also means that the XB271HU can be used for professional image editing if you want to.

It doesn't just look pretty, but performs well too, with its 4ms response time and refresh rate of 144 Hz. In fact, what's really interesting is that Acer has designed the XB271HU with the ability to be overclocked to 165Hz, making it the fastest gaming monitor to date. To add to that, it comes with Nvidia's G-SYNC technology so you can pair the monitor with a decent Nvidia graphics card and get smoother visuals.

Considering that it's only two 2W speakers, audio is not the monitor's best aspect. As expected, it lacks bass and even the maximum volume isn't much. However, if you're not fussy about audio then it's adequate for most purposes.

All that said, it's obvious that this monitor commands a higher premium price due to the G-SYNC feature. But if price is not an issue, this is one of the best gaming monitors you can get.

The stand comes with a cable management tool which allows users to cleanly tuck their cables away

The XB271HU monitor comes with a number of I/O and video ports

+ Visuals
  Ergonomics

− Price

CHIP CONCLUDES
A fantastic gaming monitor that fits both gamers and professionals, but has a steep price tag that's scares away all but those with deep pockets.

MSI GT72S 6QE Dominator Pro G

Price: RM11,999
Contact: MSI Malaysia Office
Phone: 1 300 22 1386
Info: my.msi.com

Operating System: Windows 10
Processor: Intel Core i7 6820HK
Graphics: Geforce GTX 980M
Memory: 16GB DDR4
Storage: 1TB HDD, 128GB SSD
Dimensions: 428 x 294 x 48mm
Weight: 3.78kg

PCMark Work: 3,284 points
PCMark Home: 3,836 points
PCMark Creative: 4,450 points
3DMark Fire Strike: 8,277 points
3DMark Fire Strike Extreme: 4,334 points
3DMark Fire Strike Ultra: 2,310 points

Performance:
Features:
Design:
Value:

Prepare To Dominate

A top contender for the heavyweight division of gaming laptops

By Nixon Ng

Kicking it back during the weekends having LAN parties with friends used to be a thing, but once you're all grown up it becomes somewhat of hassle to disassemble your PC's, just for a night's worth of gaming. But thanks to the advancements in graphic card technology, we are able to stuff more performance into graphic cards while having lower power consumption. In light of this, gaming on a mobile platform is now viable more than ever and that's where gaming laptops come in.

MSI has been one of the brands that have been constantly pushing the limits, and make some of the best gaming laptops on the market. This time they're back again with the MSI GT72S 6QE Dominator Pro G that sports some of the latest hardware with blazing fast performance and stability. Although not too portable, this laptop can replace a desktop and even give it a run for its money albeit at a higher price point.

The laptop definitely catches the eye with its large size and brushed aluminium look, and sports a red and black themed motif. The keyboard is well laid out and features a multicolour backlight. The keys also have a silver lining print which is a nice addition and accentuates the keys, making it easier to see at night. While taking a look at the specs, we can easily tell that the laptop definitely packs a punch that could rival Bruce Lee.

Benchmarks for the graphics card shows that it has roughly the same performance as the R9 380X that we also reviewed this month, which should give you a rough idea on how powerful this laptop can perform. But as benchmarks don't really tell the whole story, we put it to the test with some of the latest games such as Star Wars Battlefront and Assassin's Creed Syndicate. At 1080p resolutions, the GT72S should be able to play most triple AAA titles with ease.

Aside from performance, the laptop has a few nice features such as a 'gear Shift" function, which lets you overclock the laptop at the tap of a button. If you need that bit more of FPS, that's your ticket to getting it. At times, the fans can be really loud because its working really hard to keep the laptop cool, sporting a dual-fan design the fans does it job but at the cost of loud fans.

The MSI GT72S comes with RGB-lit keyboards that makes it look cool

The GT72S also comes with an overclock button on the keyboard, allowing you to instantly boost the performance of the machine

+ Performance
− Loud fans

CHIP CONCLUDES

The MSI GT72S 6QE Dominator Pro G performs like a dream, allowing gamers to replace a bulky PC with a laptop. Features wise the overclock function is a great addition and makes this laptop all the more special.

Microsoft Surface Pro 4

Price: From RM3,999
Contact: Microsoft Malaysia
Phone: 1 800 886 295
Info: www.microsoft.com/en-my/

Operating System: Windows 10
Display: 11.5 inches (2,736 x 1,824)
Processor: 6th Generation Intel Core Processor
Connectivity: WiFi, Bluetooth, USB 3.0
Memory: 8GBs
Storage: 256GB SSD

PCMark Work: 2,291 points
PCMark Home: 2,102 points
PCMark Creative: 2,280 points

Performance:
Features:
Design:
Value:

The Surface Returns

Microsoft's Surface Pro 4 shows why it's still the king of the hill

By Nazrin Zain

Microsoft's Surface Pro 3 was a rousing success, with a majority of users even recommending it to people who are on the fence about springing the money for one. The next iteration of the Surface Pro then is expected to have more bells and whistles. Does it? Read on to find out more.

The Surface Pro 4 is powered by a sixth generation Intel Core processor, with a choice of either 4GB, 8GB and 16GB of RAM. As far as storage goes, users also get to choose between 128GBs, 256GBs, 512GBs and 1TB of storage space, enough options regardless if you're an office worker looking for a mobile solution, or a multimedia expert rendering videos and graphic projects.

The display screen of the Surface Pro 4 has also been made a bit bigger, now at 11.5 inches, with a resolution of 2,736 x 1,824 in a 2:3 ratio, which provides a bigger working space for users to play around with. At a thickness of just 8.45mm, the Surface Pro 4 is also the thinnest Surface yet, allowing users to just put it in their backpacks or handbags, with no obvious bulge.

Performance-wise, the Surface Pro 4 is

an excellent device. If you're familiar with the Surface Pro 3, the Surface Pro 4 functions exactly how you know it will, but with the added benefits of the device now running cooler, and longer on battery, in no small part thanks to the new Skylake processor the device runs on.

Speaking of new things, more quality-of-life features on the new Surface Pro 4 includes a magnetic strip where you can put your Surface Pen on, and a newly improved keyboard with better spacing, and a trackpad that has been improved over the last generation's model. Not only that, the hinge at the back now allows you to position the Surface Pro 4 in such a way that it almost rests on its back on your lap.

One of the few issues one may find with the Surface Pro 4 is perhaps its asking price. The unfortunate bit is the fact that the Intel Core m3 model, which is the lowest spec Surface Pro 4 that you can obtain here starts at RM3,999, and goes all the way up to RM9,799 for the fully souped up spec, and that's before you factor in the price of the keyboard, which is always sold separately.

The Surface Pro 4's keyboard is an upgrade to the previous model's, with better spacing and travel

The Surface Pro 4's hinge has also been upgraded, allowing users to push the tablet as far back as possible

+ Performance Features

— Price

CHIP CONCLUDES

The Surface Pro 4 continues the Surface Pro 3's legacy of being the best Windows-based tablet/notebook hybrid to date. However, the price will be raising more than just a few eyebrows.

MSI B150M Mortar

Price: RM486
Contact: MSI Malaysia
Phone: (03) 2282 8599
Info: game.msi.com

Socket: LGA 1151
Chipset: Intel B150
RAM Slots: 4
Memory: 2133 MHz DDR4
Ports: 1x PS/2, 1x VGA, 1x DVI, 1x HDMI, 1x LAN, 4x USB 3.1, 5x Audio port, 1x Optical (SPDIF), 2x PCIe x16, 2x PCIe x1, 6x SATA 6Gb/s

PCMark 8 Home: 4,480 points
PCMark 8 Creative: 4,989 points
PCMark 8 Work: 3,819 points

Performance:
Features:
Design:
Value:

By Matthew Yap

Explosive Value

It might not blow you away with its features, but MSI has packed all the essentials in an affordable package

This year promises to be an exciting year for PC enthusiasts, with AMD's Zen architecture possibly providing competition to Intel. But for those who are interested in upgrading in the interim and wait for the newer platforms to mature, maybe something cheap to save up your budget will be good – like MSI's B150M Mortar.

The relatively simple looking box and motherboard belly its moniker. Fortunately, its build is certainly better than its name as it is well-built. It has four DDR4 DIMM slots that use the DDR4 Boost technology to improve system stability, there's support for the new Intel Skylake CPUs, six SATA 6Gb/s ports for lots of storage, and also an M.2 slot for WiFi rather than for SSD.

Current batches of the B150M Mortar's box might have a typo on it; although the box shows only one PCIe x16, there's actually two and there's support for CrossFire. One of the slots has MSI's Steel Armor to prevent it bending from heavier GPUs, but left out the other one which kind of defeats the purpose of having CrossFire support. Two PCIe x1 slots are also available so that you can have add-ons like extra USB ports.

Support for casing fan is very basic here with only two fan headers. For additional fans, you'll have to get a casing with a built-in fan hub. Being a M-ATX motherboard, the B150 Mortar fits right at home with mid tower cases, and those with clear side panels will allow you to see the LEDs light up when the board is powered on. A nice bonus feature.

The Mortar has a good suite of software as well and the handy Click BIOS 5. New and improved, the Click BIOS 5 is easy to navigate and has the usual bevy of settings to better tune the system, or overclock it if want to. The other software we want to highlight is the MSI GAMING APP. With it, you can toggle your PC's performance to high or low, adjust screen settings, control your MSI GPU's LED lights, or even alter the DPI settings for your mouse without having to download a separate software. All these are done with a few mouse clicks.

The MSI B150M Mortar's best strength is its versatility. With built-in ports for display and the Audio Boost feature, it can serve well as a HTPC. You could also use it to build a gaming or video rendering PC, since it has four DDR4 RAM slots, CrossFire and Intel Skylake CPU support. Best of all, you don't have to pay an arm and a leg to own it.

The B150M Mortar motherboard comes with MSI's Steel Armor plate to help prevent heavier GPUs from bending

Despite not being an Intel Z-series motherboard, the B150M Mortar comes with a decent amount of I/O ports

+ Great value
Lots of IO support

− Can't overclock much

CHIP CONCLUDES
Skylake is still relatively new and there's also AMD's upcoming Zen to consider. But if need a more affordable system in the meantime, the MSI B150M Mortar is a great option.

AMD Radeon R9 Nano

Price: RM2,140
Contact: AMD Malaysia Sdn Bhd
Phone: (03) 8316 3512
Info: www.amd.com

Memory: 4GB HBM
Ports: 1x HDMI, 3x DisplayPort
Slot Size: Dual-Slot
Dimensions: 152x42x143mm
Weight: 1kg

3D Mark
Fire Strike: 12,054 points
Fire Strike Extreme: 6,301 points
Fire Strike Ultra: 3,362 points

Performance:
Features:
Design:
Value:

A Little Bit Smaller Than Usual

By Nixon Ng

If you want things to be as small as can be, the R9 Nano will help you to accomplish that

The slim profile is to die for, and its size is truly appreciated by SFF builders

Sometimes it's the small things in life that matters, that line works for computers nowadays. You no longer have to have a big bulky computer on your desktop anymore, instead you can have quaint little stylish casing filled with powerful hardware. This is called a Small Form Factor (SFF) PC, a pretty niche market in Malaysia at the moment, but it has the potential to go mainstream. Why, you might ask?

Well we could say that an important contributing factor would be AMD's Radeon R9 Nano graphic card. This tiny little graphics card from AMD proves that big performance, can come in small packages. Honestly, one would never expect that this little piece of hardware is capable of contending with some high to middle end cards, but you'd be oh-so-terribly wrong.

The R9 Nano is a great graphic card to work with, since it's small allows it to fit nicely into any gaming rig without worry of hard drive cages or SATA ports. This is quite an important aspect which is usually overlooked, because

having a smaller graphic card technically leaves more air to flow which results in better airflow. Not only that, it's much more aesthetically pleasing since the internals of your rig are cleaner and more organised.

Performance-wise we ran it through 3D Mark Fire Strike and its higher benchmarks which resulted in scores, which any graphic card this size can be proud of. It fits itself above the R9 390X and along the lines of the R9 Fury X and GTX980. That in itself makes it quite a powerful card for gaming and perfect for a SFF build. Playing games like Witcher 3 and Assassin's Creed Syndicate in 1080p resolution is fluid, and should have no lag or close to no lag at all, most likely the former.

When it comes to acoustics and temperature performance, the R9 Nano definitely does a swell job in keeping itself cool and quiet. Even on load it is reasonably quiet but the fan works hard to keep the Nano cool, and at higher RPM's begin to get a bit loud, but still within an acceptable range.
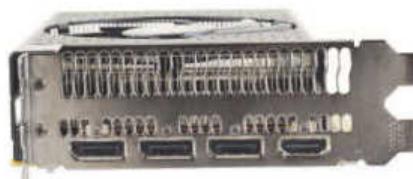
No DVI ports to save space, but thats alright HDMI is widely used now and DisplayPort is on the rise

+ Size
Performance

— None

CHIP CONCLUDES

The AMD Radeon R9 Nano is a godsend piece of hardware for builders of SFF computers, providing performance of high-end graphic cards all in a small package. If you're a SFF enthusiast it's perfect for any kind of build, and even if you're not the R9 Nano still has a great price to performance ratio.

honor Band Z1

Price: RM259
Contact: Huawei Malaysia Mobile Hotline
Phone: 1 800 22 0086
Info: www.vmall.my

Display: OLED
Connectivity: Bluetooth 4.0
Chipset: Cortex M4 STM32F411
Water Resistant: Yes (IP68)
Port: Proprietary magnetic charging dock
Touch Screen: Yes
Weight: 25g

Performance:
Features:
Design:
Value:

Small And Steady

By Nixon Ng

A good looking fitness tracker that doesn't break the bank

The smart wearables boom is finally here, and many smartphone manufacturers have already jumped onto the bandwagon, with many of their own iterations of a smart wearable. honor has graciously sent us their Band Z1 smart wearable for us to play around with. It's a minimalist smartwatch with fitness tracking capabilities.

honor has priced the Band Z1 at quite a low price point, but the price does reflect the product in its own way. The Band Z1 is a very simple device, it has a lot of basic features and comes in a stylish yet functional design. The display is an OLED touchscreen that supports swipes, touches, multitouch and hold which is your main method of navigation, but you can pretty much scroll through the entire menu in a few swipes. It also comes with Bluetooth which you'll need to sync to your phone, by using the Huawei Gear app.

The wrist strap uses a dual-coiling method that gives off a stylish feel, reminiscent of leather wristbands. The watch also comes light at only 25g, Using the watch alongside everyday tasks allows you to track your fitness activity, such as steps, calories burnt, and even sleep tracking. Furthermore, even though the watch looks simple, the Band Z1 is dust and waterproof with an IP rating of IP68, making it dust and water-proof up to a depth of 1.5m.

When it comes to battery life, the 70mAh battery doesn't seem like much, but do compare it to the specifications of the watch. With heavy use we could squeeze out about 3 or 4 days of usage and when used only for checking the time it could last almost 3-4 times the amount of days. It also charges up extremely fast, just by charging it for 8-12 minutes we could squeeze out another full day of usage easily.

The steps counter is quite accurate with only a slight difference and shouldn't bother your calculations. The Band Z1 just does what it set out to do, and at that price point it's tough to find a competing product with such value.

Easy to use, plain and simple, a very basic smart wearable

The small size and slim design would attract those who care about being fashionable

+ Minimalistic
Stylish

— Lack of features

CHIP CONCLUDES

If you're on a budget and are looking for a fitness tracker to keep you focused on your goal, the Band Z1 will fit that role. But if you have the budget, there are much better options due to having more features such as heart rate monitors.

Pebble Time

Price: USD199 (RM835)
Contact: N/A
Phone: N/A
Info: www.getpebble.com

CPU: Cortex M4
Screen size: 1.25 inches
Screen resolution: 144x168 pixels
Display technology: Colour e-paper
Compatible platforms: Android, iOS

Performance:	▣▣▣▣▢
Features:	▣▣▣▣▢
Design:	▣▣▣▢▢
Value:	▣▣▣▣▢

By Nazrin Zain

Time For Another Pebble

Simplicity does it for the Pebble Time

Pebble can be widely considered to be the pioneer of the wearable and smartwatch industry. In a market where it can be argued that smartwatches have hit peak user-base, Pebble continues to move along, unperturbed by what's happening around it, as the company went back to Kickstarter to get fans and potential new users to fund their latest Pebble idea, the Pebble Time.

The brand new Pebble Time is a familiar device, if you've seen or used the original Pebble before. It still sports an always-on screen, a battery lifespan that only requires a recharge after every week or so, and will read forward your phone's notifications to the watch's display.

That's pretty much everything the older Pebble model is capable of, so what's changed since then? For starters, the Pebble Time now sports a coloured e-paper screen, although to be fair this is more like a hue of colours rather than it being a flurry. The second most important change is that it now supports more add-ons than before, and isn't just limited to a small number like the original Pebble.

The Pebble Time is also now capable of pushing even more notifications, such as ones from Whatsapp, Twitter, Swarm and more. You can also pick and choose which app notifications you want to be pushed from your phone, which will save you a lot of hassle.

Another feature built-in into the Pebble Time is also what is called Quiet Time. This makes it that while the Time is still receiving notifications, the watch will not vibrate. This is especially useful when you're in a meeting, or are engaged in a rapid-fire discussion on an instant messaging service like Whatsapp or Line.

On top of that, the Pebble Time is now also capable of doing things like track your step count and sleeping hours, kind of similar to what many fitness wearables are also capable of, even if it's not as accurate as some of these devices.

As far as battery life is concerned, the Pebble Time features an almost similar uptime to that of the original Pebble, although if your device constantly has notifications firing off every now and then, the reduction in battery life is quite noticeable, especially when you consider that the Time also sports a colour display now. ▣

The Pebble Time uses its proprietary charging cable, which is unfortunately not compatible with the first-generation Pebble model

The buttons on the Pebble Time have been redesigned to make it easier to press now

+ Improved features Long-lasting battery	− Proprietary connector for charging

CHIP CONCLUDES

The Pebble Time is a great smartwatch to own, if the rest of the options out there in the market is a bit too pricey for your liking.

Lenovo Yoga 900

Price: TBA
Contact: Lenovo Technologies Sdn.Bhd
Phone: 1 800 80 8575
Info: www.lenovo.com/my/en

Operating System: Windows 10 Home
Processor: Intel i7 6500U
Graphics: Intel HD Graphics 520
Memory: 16GB
Storage: 512GB SSD
Others: Wireless AC, Bluetooth 4.0
Dimensions: 324 x 225 x 14.9mm
Weight: 1.3kg

PCMark Work: 2,657 points
PCMark Home: 2,422 points
PCMark Creative: 2,576 points

Performance:
Features:
Design:

Bending Over Backwards

By Nixon Ng

When portability meets power, you get the Yoga 900

Looking for a work PC nowadays is quite a daunting task, especially with all the latest hardware's just popping up in laptops. A work laptop should be light, portable, fast and sturdy enough for travel. After being teased last year, the Lenovo Yoga 900 has finally reached our shores, and we were given the chance to play with this bad boy from the get go.

The Lenovo Yoga 900 comes equipped with the latest Intel Skylake processors, which would fill our criteria of it being fast. It also comes with a SSD for quick booting and making sure file transfer speeds are fast and efficient. Both of these, combined with the 16GB of RAM provided, is more than enough for a working class adult.

At first touch the Yoga 900 felt sturdy, combined with its smooth finish was an extravagant sight. Weighing in at 1.3kg it's pretty light, and with a 13.3-inch display it's perfect in our opinion when it comes to portability. But don't underestimate the 13.3-inch display as it's capable of QHD+ resolutions of 3200x1800 and uses IPS technology for wide viewing angles.

It comes with a lot of new technologies, some the latest some old but recently gaining traction. For example, it has a wireless card capable of the 802.11a/c network standard. Then there's the up and coming USB Type-C 3.0. The overall design of the Yoga 900 is great, it's slim, light, and aesthetically pleasing so now we can put that aside and get into the grimy details.

Before we forget to mention, the Yoga 900's display is a touchscreen display. Navigating through touchscreen is smooth but could be a bit more responsive and accurate, sometimes we had to tap a few times because the cursor was off from where we tapped. Other than that, the touchpad was a breeze to use and the keyboard is definitely one of the more comfortable ones we've tried. Carrying it from event to event, and then using the Yoga 900 to finish our work was an enjoyable experience.

But the piece de resistance was definitely the feature that gives the laptop it's moniker of Yoga. The hinges found on the Yoga 900 is probably one of the best hinges on a laptop, allowing the laptop to transition into the different modes available. The hinges hold the display and laptop together tightly, but at the same time allows smooth rotating, which incredibly strikes a good balance between locking and movement.

The hinges are probably the best part of the laptop, locking is tight yet allows for easy rotating

Bending it backwards like so is perfect if you want to watch movies while chilling back

+ Aesthetics
Hinges

— Touchscreen

CHIP CONCLUDES

If you're looking for a work laptop, it's hard to say no to the Yoga 900. With its great looks and functionality, the Yoga 900 is definitely something you should put on your to-buy list.

ASUS ROG Maximus VIII Formula

Price: RM1,943
Contact: Build Technology Supply Sdn Bhd., ECS Astar Sdn Bhd
Phone: (03) 7955 3699, (03) 6286 8222
Info: www.asus.com/my/

Socket: LGA 1151
Chipset: Intel Z170
RAM Slots: 4
Memory: DDR4
Ports: 1x PS/2, 1x DisplayPort, 1x HDMI, 1x LAN, 1x USB 3.1, 1x USB Type-C, 6x USB 3.0, 5x Audio ports, 1x Optical (SPDIF), 2x WiFi antenna port, 2x PCIe x16, 1x PCIe x4, 3x PCIe x1, 8x SATA 6Gb/s, 2x SATA Express

PCMark 8 Home: 4,474 points
PCMark 8 Creative: 5,003 points
PCMark 8 Work: 3,801 points

Performance:
Features:
Design:
Value:

By Matthew Yap

Winning Formula

ASUS continues to show that they know how to build amazing motherboards

It almost seems like yesterday when Intel launched its Z170 chipset, but OEMs are already biting into it, predicting that the enthusiast market is ready to upgrade. Are you? If so, then check out the new and shiny ASUS ROG Maximus VIII Formula.

The Maximus VIII Formula has an imposing design, with its all black shroud and RGB illumination. The RGB LEDs can light up in different ways, such as a breathing effect or just plain static. You can also add an additional 12V RGB strip of your choice with the built-in header. At the back, you'll find a steel backplate filled with thermal pads to help conduct heat away from the major components. Even more interesting is the CrossChill EK, a cooling block placed over the MOSFET that enables you to do liquid cooling on it. The amount of thermal reduction on this motherboard is incredible and it works too, keeping temperatures noticeably lower than most motherboards. Overclockers are sure to appreciate this, because it means the limits to which this board can be overclocked could be very high.

It's not a Maximus board without a tonne of I/O support. The Maximus VIII Formula has

four DDR4 DIMM slots that support up to 3,733 MHz, onboard WiFi for 802.11 a/b/g/n/ac, and a USB 3.1 Type-C. Moreover, there is a total of eight SATA ports and two SATA express, as well as an onboard M.2 that can be connected to using a U.2 connector. For GPU support, there are three PCIe 3.0 with two that can run a SLi or CrossFireX setup.

The motherboard is equipped with the SupremeFX audio chipset and the Sonic Studio II programme. The programme proves handy when you need to tweak the audio, improve audio recording quality for those who like to cast or stream, and reduces noise so that you can hear in-game voice chat with greater clarity.

While having RGB lighting is a nice touch, it's really just there for the aesthetics and has no practical use. But those who are who want something really special, you won't be disappointed by the Maximus VIII Formula. Between its high performance, heat threshold and polished design, it is undoubtedly one of the best premium motherboards available now that money can buy. That's if you can afford it, of course.

Being a top-of-the-line motherboard, the Maximus VIII Formula comes with the ROG armor, which helps protect the motherboard from bending issues

The Maximus VIII Formula comes with more I/O ports than you'd know what to do with

+ Lots of features
Cool design

— Price

CHIP CONCLUDES

An amazing motherboard that can bring current hardware to its limits, provided you use liquid cooling. However, its performance and rich feature set will cost you an arm and a leg.

OKI B512

Price: RM2,120
Contact: OKI Data (S) Pte Ltd
Phone: (03) 2287 1177
Info: www.okiprintingsolutions.com.my

Type: LED Technology
Max Paper Size: A4
Max Paper Count: 530
Print Resolution: 1,200 x 1,200 DPI
Scanner: No
Connectivity: USB 2.0, Ethernet

Performance:
Features:
Design:
Value:

It's All Black And White

By Nazrin Zain

OKI's B512 monochrome printer gets your printing jobs done

The OKI B512 is a monochrome duplex printer that's meant to be used in office environments where document printing happens far more frequently than anywhere else.

As it has always been with OKI printers, the B512 is a big, white machine. Its paper tray holds about 530 pieces of paper, while there is an option for you to extend that even further, if your office requires it.

Operating the B512 is fairly straight forward, and in fact, we did not need to download any drivers as the auto driver installation feature settled everything for us and we got started almost in an instant. As far as feature goes, users can print from the printer via USB, or over the network with a LAN cable.

Starting up the printer is also a pretty breezy affair, as it took no time at all for the printer to activate. Printing-wise, OKI says that the printer is capable of printing up to 45 pages per minute, and during our tests, the numbers weren't too far off, and we're keen to believe that any slowdowns are probably due to the

heating element needing to cool down a bit.

If you need quick access to the printer features and functions, the B512 also features a digital display that allows you to check for various things such as paper and toner count, network address, print jobs and more.

The B512 also comes with built-in duplex printing, which automatically prints documents on both sides of the paper, without the need for users to adjust the paper. This feature helps offices save a lot of time, paper and reduces paper wastage.

How is the print quality of the B512, you ask? If there's one thing OKI typically does really well, it's in the print quality department. Here, the B512 does not disappoint as each of the printouts that were churned out of the machine looks as impeccable as the last. There are no rogue prints to be seen, which is great.

The only caveat here is that the cost price for one of these units is quite steep. Therefore, we can only recommend it if you're absolutely serious about your document prints, as that is its only function.

Choose the toner size to suit your business needs, ranging from 3k, 7k or extra high capacity 12k toner for the lowest running costs

The digital display on the B512 allows you to quickly access the printer's various functions

+ Print quality
Usability

— Price

CHIP CONCLUDES

The OKI B512 monochrome printer is a decent printer all around. It's got networking capabilities, so just the one unit is good enough to be shared by employees in a small office.

ASUS STRIX RAID Pro

Price: TBA
Contact: Build Technology Supply Sdn Bhd
Phone: (03) 7955-3699
Info: www.build.com.my

Chipset C: Media USB2.0 6632AX High-Definition Sound Processor DAC ESS SABRE9006A Premier 8 Channel Audio DAC
Frequency Response: 10 Hz to 48 KHz
Sample Rate: 44.1K/48K/88.2K/96K/176.4K/192KHz @ 16bit/24bit
Ports: 5 x audio jack, 1 x Line-in/microphone/ 1 x SPDIF
Dimensions: 190mm x 130mm x 22mm

Performance:
Features:
Design:

By Matthew Yap

Maximising Audio Accuracy

Sound cards are a dying breed, but ASUS shows that it still has a place

Many PC users aren't fussy about the quality of their audio, or don't see improving it as priority. But there are audiophiles who use their PC's as their main music repository, and some gamers want greater audio with surround sound. This gives sound cards a reason to exist, either in the form of external DACs (digital-analog converters) or PCIe sound cards. Courtesy of our friends at ASUS, we have here the ASUS STRIX RAID Pro for review.

Upon opening the box of the sound card, we the two main components of the products, along with a proprietary cable. One of the components is the sound card itself, which can be plugged into a PCIe slot and requires a 6-pin connector to run. The sound card has the usual STRIX owl design that's part of a plastic shroud meant to block out EMI emitted from other components in the chassis. The other part is a volume controller that can be connected to the sound card by using the proprietary cable.

The volume controller is what users will be interacting with the most. It has a dial knob for to change volume, and can also be pressed to toggle between speakers and headphones. Below the knob is the Raid Mode button, which allows you to access the surround sound, EQ,

Bass Boost, and Recording volume, and change it on the fly.

Audiophiles have as much to be delighted with the STRIX RAID Pro, because it comes with a high-end DAC in the form of the ESS SABRE9006A, and a headphone amp capable of driving headphones with impedance rating of 600 ohms. We tested it with ASUS' own STRIX 7.1 headset, some audiophile class headphones, and a pair of regular stereo speakers. For surround sound accuracy, we played a few rounds of Rainbow Six: Siege and we were able to pinpoint the location of enemy gunfire or footsteps. Next, we used the audiophile headphones and stereo speakers. These did well too, outputting good audio quality without any major flaws that can't be covered with the equaliser.

The software for users to use with this sound card is called the Sonic Studio. It provides sound basic like Bass Boost, switching sound profiles, playback configuration, and of course the equaliser bars that let you adjust the audio output to your liking. What's handy here is the Radar Pro feature, which when enabled will appear as an in-game overlay that shows you the direction where certain sound effects originate from.

The STRIX RAID Pro comes with a volume control that connects directly to the sound card

You can adjust various audio attributes here in the STRIX Sonic audio software

+ Easy to install
  Surround sound

− Lack power for certain headphones

CHIP CONCLUDES

The STRIX RAID Pro doesn't outperform other DACs of the same price bracket. But it does offer gamers 7.1 surround, which makes it a very niche item.

Sony Xperia Z5 Premium Dual

Price: RM3,099
Contact: Sony (Malaysia) Sdn Bhd
Phone: 1 300 88 1233
Info: www.sony.com.my

Display: 5.5 inches (2,160x3,840)
Processor: Qualcomm Snapdragon 810
Connectivity: WiFi, NFC, Bluetooth, USB 2.0
Memory: 3GBs
Storage: 32GBs (expandable to 200GBs via microSD)
Operating System: Android 5.1 Lollipop
Camera: 23MP rear-facing camera

Performance:
Features:
Design:
Value:

Is 4K On A Smartphone Display Worth It?

By Nazrin Zain

Sony goes all in with the Sony Xperia Z5 Premium Dual

Sony's Xperia Z3 was the pinnacle of smartphone perfection when it was launched a couple of years back, and was a huge hit amongst Sony fans and smartphone enthusiasts alike. Having skipped a generation, Sony instead is going all in with its line of Sony Xperia Z5 smartphones, and now, we take a look at the highest end model of the device, the Sony Xperia Z5 Premium Dual.

The Xperia Z5 Premium Dual sports a 5.5 inch display with a 4K resolution of 2,160x3,840 pixels, powered by a Qualcomm Snapdragon 810 processor, 3GBs of RAM and 32GBs of storage, which is expandable up to 200GBs via a microSD card. As the name implies, the Xperia Z5 Premium Dual also features support for two nanoSIM cards.

As with many high-end smartphones these days, the Sony Xperia Z5 Premium sports a fingerprint scanner, whereby in this case, is located on the phone's power button. This fingerprint scanner is only activated when the power button is pressed and the lockscreen is turned on.

At the back, the Xperia Z5 Premium sports an amazing 23MP camera which comes with a variety of features, including manual controls which allows users to take photos the way they want to. The camera also sports some pretty impressive low-light capabilities, and not to mention that it records videos in 4K too. That said we do exercise caution as 4K videos are notoriously large, even if you're just recording several minutes worth of footage.

Performance-wise, the Xperia Z5 Premium functions as well as can be hoped of a phone of its stature. Regardless of the number of apps running, the phone continues to be a powerhouse, running everything smoothly with little to no issues.

That being said, the phone is sometimes prone to slow app startup, with the main culprit in this case being the camera. Half the time, apps will open up with no issues, but during other times, it will take a few extra seconds to open up.

Battery life is also as good as the Z3. With moderate usage, we were able to stretch the phone's battery life to roughly around two days without having to charge even once, although once we started adding in gaming to the equation, that number goes down a bit to about one and a half days.

Malaysia gets the Sony Xperia Z5 Dual series of phones, allowing them to carry to numbers on one phone

The Xperia Z5's 23MP camera takes some pretty amazing shots, both indoors and outdoors

+ Performance
  Features

— Price

CHIP CONCLUDES

For its price, the Sony Xperia Z5 Premium Dual is quite an expensive phone, but if you ever find yourself needing a phone that is long-lasting, and comes with all the latest bells and whistles, that one could ask for, it may be worth considering.

ASUS R9 380X STRIX

Price: TBA
Contact: Build Technology Supply Sdn Bhd,
Servex(Malaysia) Sdn. Bhd.
Phone: 03-7955-3699
Info: www.build.com.my

GPU: AMD R9 380X
Memory: 4GB GDDR5
Ports: 2x DVI, 1x HDMI, 1x DisplayPort
Slot Size: Dual-Slot
Dimensions: 273 x 140 x 43mm

3D Mark
Fire Strike: 8,307 points
Fire Strike Extreme: 4,107 points
Fire Strike Ultra: 2,194 points

Performance:
Features:
Design:

STRIX, Silent & Deadly

Black and red for the Red Camp

By Nixon Ng

AMD are always in the pursuit of the best performance they are capable of. Their devotion for making quality hardware is something that most people don't see, and instead prefer to look at numbers. Despite that, AMD continues to work hard and manages to produce powerful hardware at a competitive price point.

The ASUS R9 380X STRIX comes with two clock speeds, one being 1030MHz in its Gaming Mode and 1050MHz in its OC Mode. It also sports 4GB of GDDR5 VRAM with a memory bus of 256-bits, and although this graphic card is factory overclocked out of the box, we were able to overclock it slightly further but results may vary on different cards.

ASUS sticks to their black and red theme for that aggressive yet stylish look, that ASUS is known for. Now sporting a dual wing-blade 0dB fan design and a new cooler that's still built upon their DirectCU II technology. The new 0dB technology allows the graphic cards fan to remain off at a set temperature, which means there's no fan noise whatsoever at a set temperature making it a silent graphic card when possible.

On the back, the graphic card houses two DVI, one HDMI and one DisplayPort allowing for a multi-monitor setup if that's what you're looking for. To power it up, there are two 6-pin PCI-e power jacks that are required to get the card up and running. The card is aesthetically pleasing and at the same time cool and quiet even when under load, but do expect noise to increase when overclocking so the fans can keep the temperatures low.

When it comes to performance, the ASUS R9 380X STRIX doesn't fool around, being able to procure a stable FPS of at least 60, even on the latest games such as The Witcher 3 and Assassin's Creed Syndicate on High settings. Bumping up to Ultra might give you varied results of about 30-50FPS depending on the game. Even during the messy moments of the game, it's safe to say that gameplay was not impeded, and you're in for a smooth gaming experience.

DVI, HDMI, DisplayPort all the varieties needed for monitors and TV's these days

The ASUS 380X STRIX comes with a eye-catching backplate which adds to its aesthetics

+ Performance
Nicely designed backplate

— None

CHIP CONCLUDES

A great graphic card for those who just aren't interested in going into 4K gaming, quiet and cool and aesthetically pleasing ASUS does it right again and doing gamers justice.

Lenovo Ideapad Y700

Price: RM4,099
Contact: Lenovo Technologies Sdn.Bhd
Phone: 1 800 80 8575
Info: www.lenovo.com/my/en

Operating System: Windows 10
Processor: Intel Core i7-6700HQ
Graphics: NVIDIA GeForce GTX960M
Memory: 4GB
Storage: 1TB HDD
Others: Bluetooth 4.0, Gigabit LAN, 802.11ac Wi-Fi, SD/SDHC/SDXC/MMC card reader
Dimensions: 387mm x 277mm x 25.95mm
Weight: 2.6kg

PCMark 8 Home: 2,910 points
PCMark 8 Creative: 2,870 points
PCMark 8 Work: 2,995 points
3DMark Fire Strike: 4,094 points

Performance:
Features:
Design:
Value:

The Right Idea

Lenovo sure knows how to make affordable gaming notebooks

By Matthew Yap

Lenovo is a brand we don't usually associate with the term gaming, at least not locally. But the Chinese company has made decent gaming laptops before, such as the Ideapad Y50. From the same series of laptops is the brand new Lenovo Ideapad Y700, a refresh of the Ideapad Y50 to cater to gamers who are looking for the latest in midrange gaming notebooks.

Compared to many gaming notebooks, the Ideapad Y700's top doesn't feature some fancy logo. It's a plain black brushed aluminium lid with the Lenovo brand logo. The build is solid and there's a noticeable heft to it, since it weighs about 2.6kg. Opening the lid, we find that the machine is angular in certain areas, especially near the speakers and the front. This design is definitely one that would appeal to gamers.

The Y700 doesn't really have a lot of ports on it, nor one of the (more or less) obsolete optical drives, but it has the essentials. On the right side, you'll find two USB 3.0 ports, one HDMI port, an Ethernet port, and a Kensington lock. The other side houses Lenovo's proprietary AC input, a USB 2.0 port, an SD card reader, 2-in-1 audio jack, and finally a microphone port in case you don't like using headsets.

As seemingly popular these days, Lenovo gives customers the option of picking either a 1080p or 4K IPS display here. Watching YouTube and even gaming on the Y700 is a visual pleasure, with contrast and colour being excellent. Its brightness level is about average, however, as it isn't significantly bright even at 100% brightness.

Powering the Ideapad Y700 is the now commonly used Intel Core i7-6700HQ CPU, 4GB of DDR4 RAM, an Nvidia GTX960M GPU with 2GB VRAM, and a HDD with 1TB of storage to install all your games. Admittedly, the 4GB of RAM is less than adequate for a gaming machine, though Lenovo does give you the option to choose the specs for the Y700 before purchase so you can opt for 16GB of RAM.

Besides gaming, this laptop is also great for entertainment, all thanks to its 2.1-channel JBL speakers. That's right folks, the Y700 has a small bottom-facing subwoofer for bass. It might not have as much bass as some would like, but it delivers enough punch for games, movies and music.

It should be noted that upon purchase of a unit of the Y700, you'll also get a simple gaming mouse pad and a precision mouse, so that's extra value there.

The air vents at the back of the Y700 keep the laptop cool, even during hardcore gaming marathons

The small sub-woofer, found at the bottom of the notebook, provides just enough bass for games

+ Affordable
  Great speakers

− Low brightness
  Low RAM

CHIP CONCLUDES
The Y700 ticks all the right boxes for a good midrange gaming PC. Being priced so competitively just makes it even better.

ASUS ZenBook Pro UX501

Price: RM6,499
Contact: Build Technology Supply Sdn Bhd., ECS Astar Sdn Bhd
Phone: (03) 7955 3699, (03) 6286 8222
Info: www.asus.com/my/

Operating System: Windows 10
Processor: Intel Core i7-6700HQ
Graphics: NVIDIA GeForce GTX960M
Memory: 8GB
Storage: 512GB PCIe x4 SSD
Others: Bluetooth 4.0, Gigabit LAN, 802.11ac Wi-Fi, SD/SDXC/MMC card reader
Dimensions: 383 x 255 x 21.3 mm
Weight: 2.06kg

PCMark 8 Home: 3,090 points
PCMark 8 Creative: 3,122 points
PCMark 8 Work: 3,300 points
3DMark Fire Strike: 4,072 points

Performance:
Features:
Design:
Value:

Style With Function

ASUS shows that it can be a Pro with design too

By Matthew Yap

It can get confusing for consumers when there are too many choices available when it comes to notebook, but the ASUS remains one of the best when it comes to this. One of the brand's latest is the ZenBook Pro UX501, a beautiful machine that offers both performance and class.

Despite the familiar naming convention, the ZenBook Pro has more than enough to prove that it stands out on its own. For one, the base design philosophy is decidedly ASUS' own, with a fine brushed-metal finish that looks great. At 15.6 inches, it's a good size for those who want larger screens. Yet, it stays light enough at just 2.06 kg, so you won't be unwittingly building muscles while carrying it around.

While only measuring at about 21mm, ASUS managed to include a decent amount of ports on the UX501. There are three USB 3.0 ports, two on the right side and one on the left, as well as one audio jack, HDMI port, SD card reader, and best of all, a USB Type-C port that supports Thunderbolt. Since we expect there to be more upcoming USB Type-C devices in the coming months, having one that can support Thunderbolt could be great for future use.

The display of the UX501 can either be a Full HD or UHD panel, depending on your choice. In our case, ASUS sent us one with a Full HD IPS panel. As many of you know, IPS panels have greater viewing angles, and excel at outputting superior contrast and colour reproduction. The ZenBook Pro's display definitely performs up to expectation, especially when it comes to colour.

An Intel Core i7 6700HQ Skylake processor lies at the heart of this PC. In addition to that, it comes with 8GB of DDR4 RAM, an Nvidia GTX960M graphics processor, and a 512GB M.2-based NVMe SSD. Thanks to these specs, the UX501 is able to deliver a user experience and great computing performance. Having the GTX960M GPU also means you can play a fair number of games on it, albeit only at medium settings for games like The Witcher 3 or Fallout 4.

Our experience with using the ZenBook Pro was largely a mixed one. Sure, we liked the keyboard well enough - a full-sized one with a numpad too. It may have felt a bit squashed near the numpad, but key travel is good and it's even backlit. However, the speakers and battery life aren't great. For the former, its max volume is only as loud as a normal conversation, while the battery life is only average.

The ASUS ZenBook Pro comes with a USB Type-C port for faster transfer speeds and charging capabilities

The ASUS ZenBook Pro's keyboard performs admirably well, with decent spacing and good key travel

+ Design
Good keyboard

— Average battery life
Weak speakers

CHIP CONCLUDES
If you are looking to purchase a new notebook for work and games, this UX501 is one to consider.

Synology DS416j

Price: RM 1,759
Contact: Build Technology Supply Sdn Bhd
Phone: (03) 7955 1136
Info: www.synology.com

Number of Bays: 4
Connectivity: 1x RJ45
Ports: 1x USB 3.0, 1x USB 2.0
CPU: Marvell Armada 388 88F6828 1.3 GHz
Dimensions: 184 x 168 x 230mm
Weight: 2.21kg

Performance:
Features:
Design:
Value:

It's Nice Having A NAS

By Nixon Ng

A home media server couldn't get any easier than this

Just when you thought your home network was complete, you catch a glimpse of a NAS sitting on a computer shop's shelf and start to wonder. Synology is probably the brand you'd most likely see on shelves, and can be found in models made for consumers such as home users and enterprise for offices and larger enterprises.

The Synology DS416j is a 4-bay NAS capable of a maximum internal raw capacity of 32TB, which approximately should be about four 8TB drives. For each bay, it supports hard drives ranging from 2.5-inch SSD's and HDD's to 3.5-inch ones, so compatibility with the latest hard drives shouldn't be an issue. Additionally, the maximum single volume size of the DS416j is 16TB, just something to note down in case. The NAS also supports a wide variety of RAID types, and we believe it should cover most if not all, of your RAID needs.

To insert the drives into the bays, you'll have to remove the thumbscrews on the back and remove the metal casing, which will allow the back along with the fans to slide back and giving access to the bays. Inserting the drives into the bays was pretty easy, just slide it onto the dock, screw it in to keep it from moving, and slide it back into the bay and voila. We used our own 6TB HDD's to give the NAS a whirl and booted it up for the first time.

Following the instructions given inside the packaging box, setup was really quick and required us to do a format on our HDD if we wanted the least problems popping up in the future. Prompting us to login with a Synology account, we hastily proceeded and was greeted by the Web UI. If we had to describe it, the Web UI was more like a customised virtual PC in a web browser. With us barely doing anything, the NAS was already setup and ready to be used for the entire home/small office.

As the DS416j was designed for home and personal use, we tested it by using it as a media server to share photos and movies amongst ourselves. Transfer speeds were good, but relied quite heavily on your router, with the right router your transfer speeds are great but if you're using stock routers, it's not uncommon to see slightly disappointing speeds. But other than that, accessing movies and picture off of the NAS resulted in no issues, smooth playing of videos on anything connected to the network including DLNA devices.

Drive bays are easy to slide in and out, and the 2 fans are quite silent while cooling the NAS

USB 3.0 and USB 2.0 on the back to connect external devices.

+ Easy to setup
Overall performance

— None

CHIP CONCLUDES

Though some aren't able to justify the price in which NAS in general are priced at, it is safe to say that a NAS can do countless more things than a HDD docking station. So, if you want seamless media sharing in your home, the DS416j definitely does the job.

GIGABYTE P34Wv5

Price: TBA
Contact: TECH ARMORY Sdn Bhd
Phone: (03) 5887 0962
Info: www.techarmory.my

Operating System: Microsoft Windows 10
Display: 14.0 inches (2,560x1,440)
Processor: Intel Core i7-6700HQ @ 2.6GHz
Graphics: NVIDIA GTX 970M
Connectivity: WiFi, Bluetooth, USB 3.0 x3, USB 3.1 Type-C x1, HDMI 2.0 x1, miniDisplayPort x1, VGA x1
Memory: 16GB DDR4
Storage: 128GB mPCIE SSD, 1TB HDD

PCMark Work: 3,123 points
PCMark Home: 3,621 points
PCMark Creative: 4,198 points
3DMark (Fire Strike): 5,223 points
3DMark (Fire Strike Extreme): 2,726 points
3DMark (Fire Strike Ultra): 1,346 points

Performance:
Features:
Design:

Big Performance In A Slim Package

GIGABYTE's P34 features the best of two worlds

By Nazrin Zain

For the past few months, we've been reviewing gaming notebooks that are certainly very powerful, however these machines also come with one caveat: they're too big and bulky to be brought around and game with. GIGABYTE aims to fix that problem with a somewhat compact, yet elegant solution in the form of the GIGABYTE P34 gaming laptop.

The P34 features a 14.0 inch laptop with a qHD resolution of 2,560x1,440 pixels, and is powered by the latest sixth generation Intel Core i7 processor, with 16GBs of DDR4 RAM, and a 128GB mPCIE SATA SSD to house a Windows 10 install, as well as a 1TB HDD for all your multimedia storage needs. Not only that, this laptop also comes with an NVIDIA GTX 970M discrete GPU for all your gaming needs.

As far as port options go, GIGABYTE are generous with what they have to offer. The P34w sports three USB 3.0 ports, one USB 3.1 Type-C port, one VGA port, one mini-DisplayPort and one full-sized HDMI port, which happens to be HDMI 2.0, and can support an extended 4K-resolution monitor at 60Hz.

The P34W is decked with an Intel Core i7 processor is a force to be reckoned with.

Coupled with the 16GBs of RAM, there is literally nothing the machine couldn't run. Be it hardcore browsing with tens of tabs open on Chrome or Firefox, crunching numbers on Excel, programming on Eclipse or even rendering videos on Premiere and Vegas, the P34W crunches it all for breakfast.

As far as gaming goes, we were capable of running all of the latest games on offer, like Shadow of Mordor, Metal Gear Solid V and GTA V on high settings at Full HD resolution with nary a hiccup. The best part of it all is that even when running all these games, the laptop runs relatively coolly, as the many vents that are placed strategically at the back and underneath of the laptop do an amazing job at cooling the laptop.

Where battery life is concerned, Intel's new power-saving features truly shows its mettle as the P34 was able to last for about over six hours with the display at 75 percent brightness and WiFi turned on. During gaming sessions, the battery hour count drops by a couple of hours to roughly around two to three hours, which is still a respectable amount of time, by any standards.

The speakers on the P34Wv5 are Dolby Digital Theater-certfied, so you can be sure that the speakers are going to sound great

The GIGABYTE P34Wv5 comes with a flurry of I/O ports, chief of which is a USB 3.1 Type-C port

+ Performance Cooling

— None

CHIP CONCLUDES
The GIGABYTE P34Wv5 is an amazing machine. For its size, it definitely punches way above its weight in terms of performance.

ASUS ZenWatch 2

Price: RM899 (gunmetal strap)
Contact: Dynamics Distribution Sdn bhd., ECS Astar Sdn Bhd
Phone: (03) 8024 2100, (03) 6286 8222
Info: www.asus.com/my

Processor: Qualcomm Snapdragon 400 1.2GHz
Memory: 512MB
Storage: 4GB eMMC Flash
Battery: 400mAh
Others: 2.5D curved Corning Gorilla Glass 3, IP67 water resistance, Bluetooth 4.1, WiFi, 6-axis sensor
Dimensions: 49.6mm x 40.7mm x 10.9mm

Performance:
Features:
Design:
Value:

Improved Zen

By Matthew Yap

With this smartwatch, you'll have less reasons to reach into your pocket for your smartphone

Since ASUS launched its first smartwatch last year – the ZenWatch – ASUS has learned more about how to design one. The first one was a highly affordable smartwatch, but it had flaws such as its Bluetooth constantly disconnecting, sub-par battery life, and it was a little laggy during use. This month, we got to test the ZenWatch 2 and found this iteration a refreshing improvement.

The ZenWatch 2 looks largely the same, except it now has crown button that's similar to the main dial you'll find on a normal watch. There are other differences that we found when compared to the previous version. For one, the ZenWatch 2 comes in two different sizes, one for men and another for the ladies. You can also choose from three different kinds of straps and casing colour.

At the back of the watch is the charging dock, which connects to the charging cable magnetically. Charging it to full takes took around 50 minutes, which is quite fast, as long as you use the 3-pin wall plug with it. Battery life is decent, though we found that it still didn't last more than a day and a half on semi-intensive use.

Our ZenWatch 2 had gunmetal straps and didn't fit all too well. Luckily, like any watch with metal straps, you can go to a watch shop to remove some of the links to make it fit. An interesting thing to note here is that the metal strap version uses two clasps instead of one to secure. The way it is design makes the strap look almost seamless, and it sits flush against the wrist so it's quite comfortable to wear too.

The ZenWatch 2 lets you view your notifications, reply to Whatsapp, and more. A function we frequently use is replying to Whatsapp, though it only allows you to reply with short preset messages, emoticons, or with a voice message.

To get the most out of the ZenWatch 2, we downloaded the ZenWatch Manager on our smartphone. It's definitely helpful, as it can track battery remaining, storage space, and displays the current watch face. Changing the watch face is easy too and all you need to do is flick through the options available and tap on your choice. You can also download additional ZenWatch apps through the Manager.

A few apps that are useful with the ZenWatch 2 are the FaceDesigner, an app that allows you to customise the look of your own watch face; ZenWatch Wellness, a smart tracker app that works as a pedometer, heart rate monitor, and sleep tracker; and the ZenWatch Camera, which basically turns the ZenWatch 2 into a simple remote control for your smartphone's camera.

The ZenWatch 2 comes with a metal clasp, which may or may not fit your wrist

The ZenWatch 2 also requires the use of a proprietary magnetic charging cable, and can charge from empty to full in 50 minutes

+ Smooth Fast charge
− Average battery life

CHIP CONCLUDES

The new ZenWatch 2 fixed the connectivity issues of its predecessor, and is now an even better smartwatch to own, especially considering its asking price.

War Of The Ancients

The Dota 2 Shanghai Major By Matthew Yap

With Dota 2 tournaments coming in fast and furious these days, our eyes are on the big prize – the Shanghai Dota 2 Major. But before that, here's an introduction to Valve's seasonal tournament and a preview of the upcoming one in Shanghai.

The advent of the Dota 2 Majors that began last year at Frankfurt has proven to be a great boon to the growth of the e-sports title. Not only does it bridge the gap between the annual 'The International' tournaments, it also has helps the game in terms of team stability and monetary revenue. There are now a total of four international level tournaments, with three Majors set in fall, winter and spring, before the grand tournament in the summer – The International.

We won't go too much into it, but let's examine one of the benefits. Similar to The International set annually in the summer, Valve's rules dictate that teams must register their respective roster of players before a given deadline. A player that is 'locked' can't be kicked from the team, nor can he be poached by other teams. Roster changes made after the lock would cause the team to lose its chance of receiving a direct invite to the main event or regional qualifiers.

In addition, the Majors are a great boon to the entire professional Dota 2 ecosystem. As a whole, there will be more money changing hands. While we have yet to see if adding an additional three events yearly would affect the prize pool of The International, we believe that it is possible that the total prize of all four events would be equal if not more than last year's The International. Also, the three Majors provide more opportunities to sell in-game items or Dota 2 merchandise, and provides the big casting studios such as joinDOTA or Beyond the Summit with more chances to earn revenue from casting the events.

Now that we've finished introducing the Dota 2 Majors, let's talk about the next one in Shanghai. Scheduled to run for five days from the 2nd to 6th of March 2016, the Chinese Major will be held at the Mercedes-Benz Arena in Shanghai. This time around,

Frankfurt Major winner OG received a direct invite, along with Evil Geniuses, Team Secret, EHOME, CDEC Gaming, Vici Gaming, Virtus. pro, and Alliance. The other eight teams comprise of two winners each from the four regional qualifiers. They are: Team Archon and compLexity Gaming from the Americas; Team Liquid and Team Spirit from Europe;

LGD Gaming and Newbee from China; as well as Fnatic and MVP Phoenix from South-east Asia.

As of the time of writing this article, Valve has yet to release a compendium, prompting discussion if there would even be one this time considering the backlash for the Frankfurt Major's compendium.

The Many Leagues Of LoL – Numero Uno

Last year's League of Legend's World Championships saw SKT T1 winning World's for the second time in League history, something that has not been accomplished by any other team before. Now after the storm of 2015 has passed, we enter the year 2016 with teams changing their rosters in hopes for a better year. For those just starting off in League and to breathe in a fresh start for the year, here are some tournaments, leagues and teams to look out for By Nixon Ng

League of Legends Championship Series

League of Legends Championship Series a.k.a LCS is a league run by Riot Games for both Europe and North America. Twenty teams compete in two separate competitions, with only ten teams per continent. The LCS is split into both the Spring and Summer Split, where the Spring Split is to decide which team goes for the Mid-Season Invitational, and the Summer Split to decide who goes for the World Championships. This would mean that the LCS is the highest level of League of Legends play in Europe and North America.

Teams To Look Out For:
EU LCS: Origen, Fnatic, H2k Gaming
NA LCS: Team SoloMid, Cloud 9, Counter Logic Gaming

Tencent League Of Legends Pro League

This league is also known as LPL, and consists of teams from China competing in the same fashion as the LCS. There is a total of 12 teams participating and are divided into two groups, Group A and Group B. Winners of the LPL Spring Split will qualify for the Mid-Season Invitational while winners of the Summer Split will quality for that year's World Championships. LPL is China's highest level of League of Legends play with many teams attaining good results in World Championships.

Teams To Look Out For:
EDward Gaming, LGD Gaming, Invictus Gaming

League Of Legends Champions Korea

The LCK is home to some of the best League of Legends teams in the world, that have proved themselves to be formidable opponents on the international level. It is also regarded by many as the strongest LoL league in the world because of their world class players. The LCK consists of both the Spring and Summer Split and is followed by the Regional Qualififers. The LCK also sports the most wins in the World Championships with a cumulative of 3 championships.

Teams To Look Out For:
SKT T1, Samsung Galaxy, ROX Tigers, Jin Air Green Wings, KT Rolster

Made Possible By The Masses

Eye-popping Crowdfunding Projects For Tech Geeks   By Matthew Yap and Nixon Ng

Walli – The Smart Wallet

Smarter than your average wallet
www.indiegogo.com/projects/walli-the-smart-wallet#/

It could just be; the smartest wallet you'll ever own. How many of us men out there will admit to forgetting or losing their wallet every day? Losing your wallet, or even just leaving it behind when you need could spell disastrous moments. With Walli, it's possible that you might never have to experience that ever again. Walli connects to your phone and sends you a notification wherever and whenever you leave it behind. Once you connect Walli to your phone, the Walli App continuously monitors your wallet activity, which then lets you know if you somehow left a card behind. It will notify you as well if you get too far from your wallet, and if you seemed to have misplaced your phone you can set an alarm off by double-tapping your wallet to easily find it.

UsBidi – The World's Most Intelligent Charger Ever!

When charging cables start having a mind of its own
www.indiegogo.com/projects/usbidi-the-world-s-most-intelligent-charger-ever#/

Darn it our charging cable broke again!? Darn it there's only the colour purple and moss green left in the store!? How about instead you get something smarter, faster and more intelligent instead of a simple charging cable. UsBidi is created as a cable that is reliable, battery saving, time saving, mess/tangle free, and worthy as tribute to the smartphones we worship these days. The cable not only doubles the charging speed on computer USB ports, but also automatically shuts off power completely once fully charged, so you don't have to unplug, and spares your device from battery killers like heat and mini-charging-cycles. UsBidi has LED indicators, magnetic ends, and a durable colourful braided exterior that sets a fashionistas eyes on fire. Supports iPhone, MicroUSB and even USB Type C.

EVO : Charger, Battery, Remote, SD Storage

All-for-one and one-for-all
www.kickstarter.com/projects/1149583147/evo-charger-battery-remote-sd-storagein-a-keychain?ref=category_newest

This could be a life changing device for all we know, and could set the precedence of smart devices like these for years to come. Just think of it, an ultimate keychain combining all the essentials for iPhone's and Android phones you could possibly need. If you need that little bit of juice to get through the rest of your day, the EVO has a 900mAh power bank that can give up to 4 hours of battery life to most smartphones, and comes with a USB cable plus an iOS adapter so you're pretty much set in emergencies. It's also a Bluetooth remote so sync it up and it'll let you customise what the buttons can be used for, and additionally it can be used as a Bluetooth tracker so you'll never lose your keys easily again. Pssst, here's a tip, you can use it to take selfies when your using a selfie stick.

Slimger PRO
Juicing Up In Tandem
www.indiegogo.com/projects/slimger-pro-charges-magnetically--2#/

One thing many people look at when selecting a smartphone is the battery. Often, we go for power banks to help keep our devices on longer. But what if we forgot to charge the portable batteries? That's where Slimger PRO comes in! Winner of the iF Design Awards last year, the SlimgerPRO has a magnetic charging feature that allows you to charge multiple units of SlimgerPRO at the same time by stacking multiple units together. One of it will still have to be connected with a micro USB to a power source, but this way you can multiple power banks at the same time. Users of Apple devices won't be left out too, because there will be a version with a Lightning cable.

YoCam
One Cam, Many Uses
www.kickstarter.com/projects/2121748736/yocam-the-worlds-most-versatile-waterproof-life-ca
The hype of action cameras has sort of come and gone, but there are yet people who want one that can do more at a lower price. MOFILY's YoCam could be the answer. The YoCam boasts versatility as its mainstay, with MOFILY claiming that it has the functions of a GoPro, DropCam, lifelogging camera, and more. Small and water proofed, the YoCam offers a number of features that a GoPro doesn't, such as Remote Connection or Image Stabilisation. Backers who pledged at least USD 149 (approximately RM654) will get the YoCam, as well as a basic clip mount and pendant cord, so you can clip it to your pocket or wear it around the neck. Of course, extra mounting accessories will be made available separately.

MAD Glass
Constant Vigilance!
www.kickstarter.com/projects/1491829370/mad-glass-see-things-in-a-new-angle
Last year was said to be the year of wearables, even though it hasn't quite taken off locally. Fitness bands and smartwatches are somewhat popular, but here's something we find way more interesting – the MAD Glass. Designed by Hong Kong's Dragon Creative, the MAD Glass is an Android wearable that will have all the features we expect from a smartphone and more. By using Augmented Reality, the user can 'see' information and interact with it. It can be operated by gestures and voice control, so it's more or less hands free. By the time you read this, the funding period might already be over but do check it out.

Morning Couldn't Arrive Any Sooner

More than just things that go bump in the night, Until Dawn brings the movie vibe to your console. Playing out like a movie, you are put into the shoes of a group of teenagers with raging hormones, as they unravel the mystery behind the disappearance of their two friends. Characters die in this game so don't get too attached. Every decision you make in the game will affect the decisions you make in the future. By Nixon Ng

For example, if you take another person's side in an argument in the future they may remember it, and act differently based on that. This opens a lot of different ways to play through the game, you can either save one or save them all. Everything you do or don't do has an effect on everything. Kill something and something else might come to bite back. The decision all lies in the hands of the person with the controller.

The characters are modelled after their voice actors so you'll get to see some of your favourite actors in a game, such as Rami Malek (Mr. Robot) or Hayden Panettiere (Heroes) and even new breakout stars like Brett Dalton (Agents of S.H.I.E.L.D). The motion capturing and voice work done on the game is excellent, and we felt that they chose the right people to be part of the cast. The dialogue comes across fun and entertaining, but sometimes the choices given do not match the words spoken.

During gameplay there will be reflex moments where you have to enter the command buttons within a time limit, and if you fail to do so there will be consequences. This

will constantly keep you on your toes during exciting moments of the game. Alongside these exciting and comical moments, you'll start to realise there's more than just things that go bump in the night to worry of, maybe the characters won't find out, but it's possible that you'll figure out the mystery before the

end of the game.

In addition, as you traverse the snowy mountains and dingy caves, you will often stumble upon Totems. These totems will give you a glimpse of the future and your

'possible" outcomes, this can serve as a guide on how you'll plan your decisions from then on. Now on to the intricate things like graphics. Environment and weather effects are very well done, you get pulled into the game this way and you start to get immersed into the setting. The composer for Until Dawn is Jason Graves, a quite well known American television, film, and video game composer.

To name a few games that Jason has done, there's Dead Space, Tomb Raider (2013), Fear III, Prince of Persia: The Two Thrones, Evolve and many others. While also winning many awards for his work, Jason has become quite a name in the horror genre. Playing with headphones or speakers blasted out was an amazing experience for us, the music is really well done

and we could find no other complaints, other than wishing the background music could just be a little louder.

When it comes to game play, the camera angles can get a bit annoying and awkward, and that's where the game seems to fail the most. The controls can at times be clunky and when combined with the funky camera angles, navigating the game can sometimes get a bit annoying. For example, if you would transition from one room to another, if you don't reset the movement by releasing the analog stick it will follow the controls of the previous room. The thing that happens the most is even if you moved the analog stick it'll continue walking in the same direction.

But despite that, the game still is enjoyable and if there are any future games or a sequel, it would do good to work on the camera angles and controls. We also agreed amongst each other that, saving everyone on your first play through, is like moving a boulder by your own, not impossible but still a huge challenge. For those who just wants to follow the story, replayability doesn't look so bright but for those who are adamant about saving everyone there's pretty much a whole lot more you can do. If you haven't bought this game or maybe you did but never got around to playing it. Do it! 🄲

Until Dawn

Genre: Interactive Drama, Survival Horror
Developer: Supermassive Games
Info: www.supermassivegames.com/games/until-dawn
System Requirements Platform: PlayStation 4

+	Interactive Butterfly effect	−	Camera angles Clunky controls

Gameplay:	🄲🄲🄲🄲🄲
Graphics:	🄲🄲🄲🄲🄲
Sound:	🄲🄲🄲🄲🄲
Replayability:	🄲🄲🄲🄲

Line Apps

Line is taking the world by storm with it's interesting features, such as adding people using a QR code, and such. Companies can even take advantage of their features to create "mobile competitions", where users can get cash vouchers if they answer a question correctly. Line is most widely used amongst teenagers these days thanks to the cute and attractive stickers that the app has to offer. Not only that, Line is offering built-in apps as well, so let's dive in and find out more By Nixon Ng

YCon

YCon is an app created by LINE that allows you to create your very own stickers and emoticons. The app allows you to turn yourself into many different character, from being an adorable little angel to being Miss Universe. There's an endless list of characters for you to choose from, so start sharing your cute emoticons and stickers with your family and friends.

LINE Brush

When texting gets boring, take it to the next level by drawing what you want to say, maybe it'll turn out to be a fun game you and your friends can play. With over 40 brushes to choose from, you can adjust the smallest details, such as the size of your photo or the brush size, switch the brush to pen, crayons and many more. Be it drawing and sketching for work or even just a random doodle on your very own smartphone, you can share and show your skills to your friends and family.

Aillis

This app was previously known as LINE Camera, but now goes by the name Ailis. It allows you to get creative with your photo editing skills, as it's made more fun and exciting with all the new features. With over 5,000 different stamps in total and a 'Beauty' function to boot, Ailis gives you all the tools and options to bring out your inner child and beauty. You can even create a whole set of collages and also makes it easy to share your photos on ay social media.
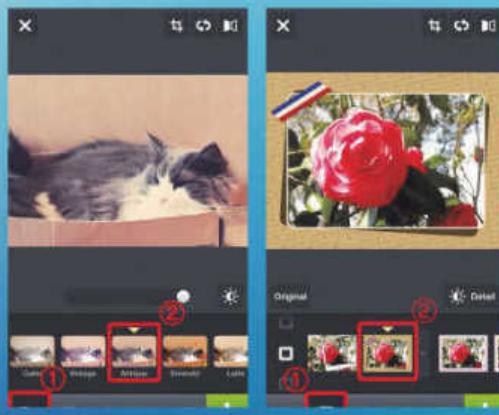
B612

A selfie app that'll keep you fun and fresh with its features. B612 is an app that is specially made for selfies and you most likely wouldn't find another app just like this. It supports many features such as video selfies, camera support, filters and many more. The selfie videos are short 3 or 6 second video clips that are complete with sound. Just tap and hold the screen to start recording. If that wasn't enough, there's also the collage shot to show everyone a glimpse of your universe, by putting your smiles together into one photo, you can create photos that stand out.
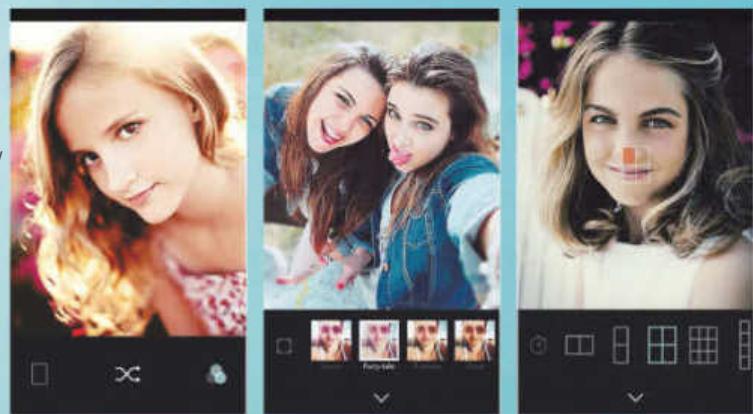
LINE Webtoon

If you're a fan of comics, and like to keep up to date with the latest comics from different genres, LINE Webtoon is perfect for you as it provides you with an easy, simple and quick access to any of your favourite comics for free. Now you can read and keep track of your comics, all in a single app on your mobile. LINE Webtoon is also updated daily with 7 to 10 new webtoons each day of the week, where else can you find an app like this free-of-charge.

LINE Toss

LINE Toss allows you to conduct quick searches, check photos, and organise them by dates or locations at a single glance. The app makes it easy to share groups of photos and videos with other LINE users as well, all while without having to log in. You can view your photos in your smartphone by different sorting options such as dates and location. What's great is that you can still share the photos via SMS with your friends who don't have a LINE account.

Timeline View
Unorganized photos are easily organized by date

Quick Browsing
Revisit memories with the "Timeline" which shows photos by date

Area View
Photos are organized by location with the location information

Powerful Share
A specific day's photos can be sent at once and easily shared via LINE
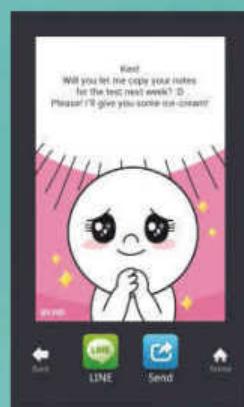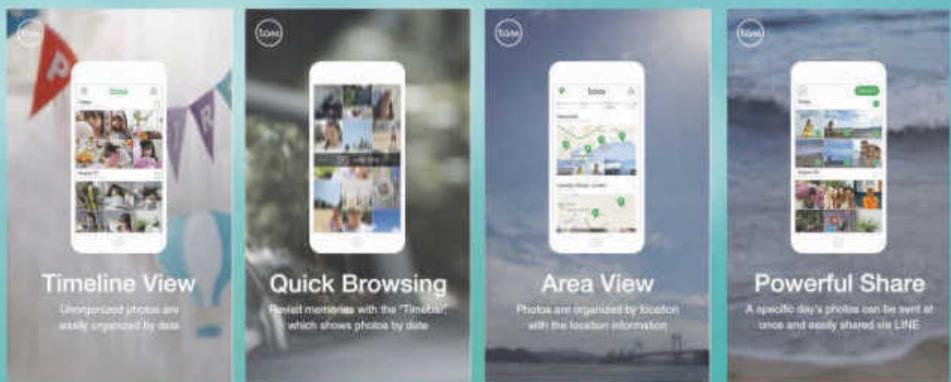
LINE Card

Ranked first in the app store in five different countries, LINE Card is the official greeting cards app that has a total of 14 million users worldwide. The app lets you personalise your own greeting cards, including selecting your own images into the card to send to your friends and family members. LINE Card comes stock with a wide selection of greeting cards and cards that are updated automatically to suit every occasion. Which means a much more personal greeting can be given now to friends and family members.
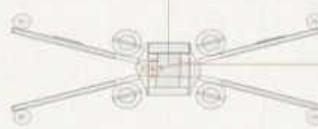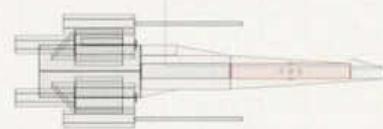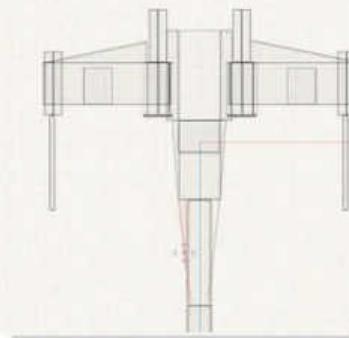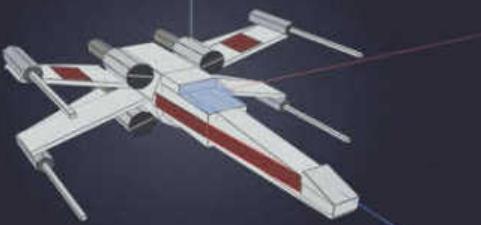
Creating 3D Objects For Your Website

With Tridiv, you can create three dimensional spaceships or logos in CSS which you can integrate into your website or blog via a simple code   By Markus Hermannsdorfer

For this Practice, we will need a browser that supports the Webkit technology. Chrome, Safari, Opera and the Edge browser from Microsoft integrated in Windows 10, all support this feature. The web service Tridiv developed by Julian Garnier displays an interface on these browsers which imitates the rendering program Blender. Using simple bodies, you can create complex objects, layer them with textures and integrate them in your own website or blogs. This, optionally, is done via an iFrame or via a shortened web address. Tridiv also gives the complete code in HTML and CSS. You can make changes or add functions later. In steps 1 to 5, we will explain to you the basic working with Tridiv and steps 6 and 7 deal with the optimization of your object. Finally, you will integrate the ready 3D object in your own website.

How to proceed

1 Start the Tridiv modeller

Go to the website tridiv.com. To start a new project, click on "Start using the app". Alternatively, select one of the three displayed samples under "Examples". If you do not see anything or a distorted image, then your browser does not support the Webkit technology. Changing the browser is the only option here.

2 Load the base forms in the editor

Ensure that the "Editor" is enabled and in the icons bar, click on one of the four basic forms - Cube, cylinder, prism or pyramid - to load them into the Editor.

3 Change the form of a body

You should now see a small circle with different icons in their basic forms. Click on the body. With the help of the icons on the circle, you can rotate the base forms, change the size, duplicate the bodies or remove them from the Editor.

4 Set the colour and transparency

You can change the transparency of the body with the help of the "Opacity" slider on the right margin of the picture. The value "0" makes the picture completely transparent, "1" removes the transparency. You will find the button "Colours" directly under it. Using this button will help you assign one colour to all sides of the body. You should know the hexadecimal value of the colour for the same. Visit the site www.html-color-codes.info to determine the colour code.

5 Wrap text around the object

If you want to paste an image on the body, then you have to first
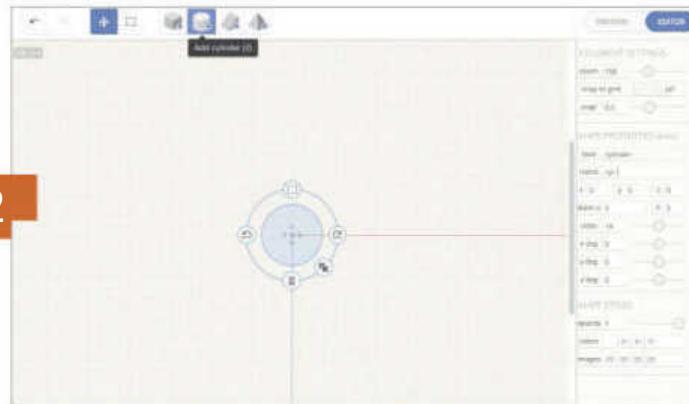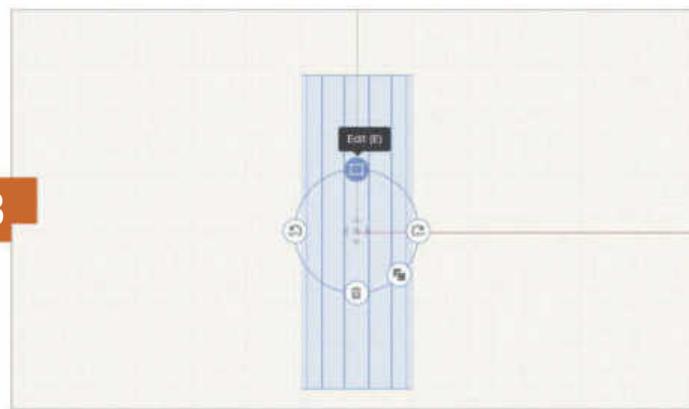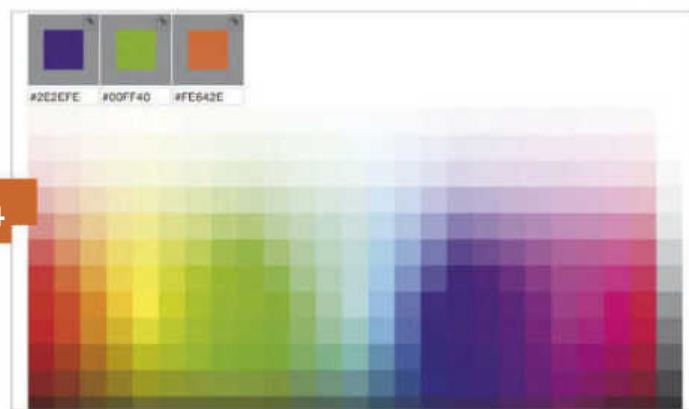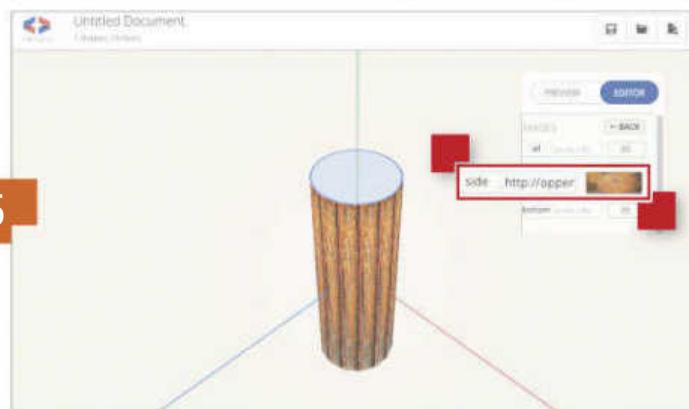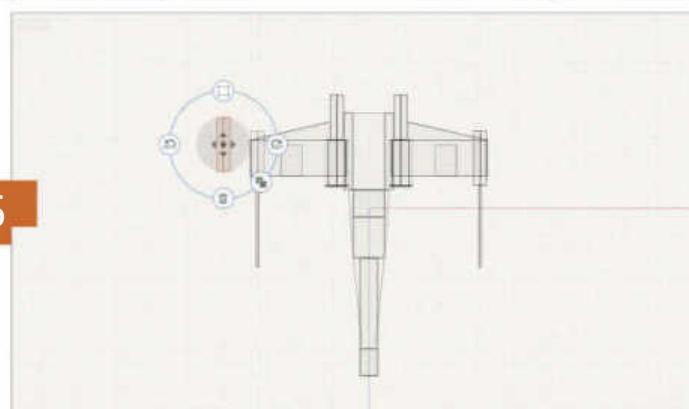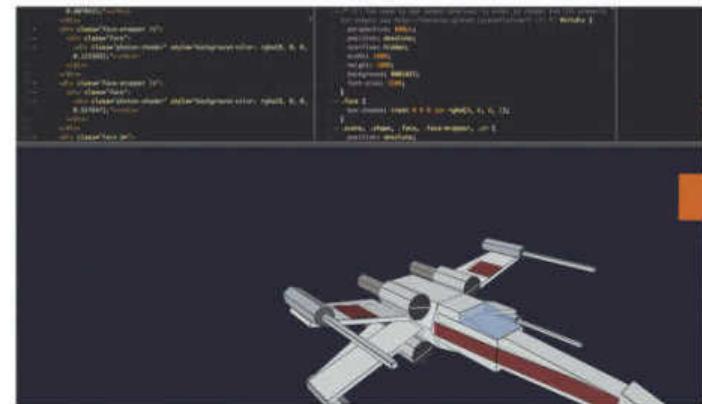
upload it in your web storage or on your blog. In Tridiv, click on "images" and enter the URL of the uploaded image. Here, you can also select whether the entire body or only parts thereof, should be covered.

6 Design complex objects

Now add other basic forms, move them to the right position and adjust the colours and textures. Using the techniques learned up to now, you can create everything from a simple company logo up to a Star Wars spaceship.

7 Optimise light setting and CSS code

When you have constructed your object, go to the "Preview". You can choose between a static or a dynamic light source there, adjust the brightness of the light and change the background colour. Since the calculation of the dynamic light is elaborate, we recommend using a static light source for complex models like the Star Wars spaceships. You will occasionally get a corresponding warning message from Tridiv. Apart from the finished object, the program also shows the final code. If you wish to change or review this code, then click on "Edit on CodePen". You will come to a new website which will display the code in HTML and CSS and your object. If it appears different than that on the Tridiv page, then click on "Settings", go to the tab "CSS" and activate the option 'AutoPrefixer' in the following dialog. Confirm with "Close". You should now see the object correctly. Click on "Save" in order to save the optimised program code.

8 Integrate object in your own website

Go back to the Tridiv page. In "Preview", you have two options to integrate the finished object in your own website or a blog: Click on "Short URL" in order to generate a web address which refers to your object saved in Tridiv or alternatively, click on "Embed" to integrate the object as iFrame. Copy the displayed code there on to the clipboard and insert it at a suitable place on your website or in the blog. 🔴

Page | Messages | Notifications | **Insights** | Publishing Tools | Export | Settings | Help ▾

Overview | Likes | Reach | Page Views | Posts | Videos | People

Showing data from **20/01/2016–26/01/2016**

| Page Likes › | Post Reach › | Engagement › |

Total Page Likes from last week | Total Reach from last week | People Engaged ✎ from last week

New Page Likes | Post Reach | Likes

— This week — Last week | — This week — Last week | Comments

Shares

1

A Look Into Facebook Statistics

The social network provides extensive statistics for some pages. You can use the same to analyse the behaviour of your visitors to your page

Who has liked which post? Where do my visitors come from and when are they online? Answers to all such questions are given by statistics under 'Facebook Insights". With the help of registered clicks and user specifications, this service determines which posts do visitors of a page like and share - for example, the Facebook page of your club, your company or a non-profit community. You will receive data in an anonymised form; it is not possible to determine who has interacted how. Using the Insight information, you can orient your posts stronger to the target audience and ensure that they are shared more often and thereby, win more fans. Note that only pages but not profiles, are statistically recorded.

How to proceed
1 Create a rough overview
Log on to Facebook and then open a new tab in the browser. Type the address https://www.facebook.com/insights/. Select your page. You will now see the total number of all "Likes", the total coverage of your posts and the number of interactions on the page within a specific time period, in the "Overview". Comments, Likes, shared posts and clicks on specific posts, among others, come under interactions.

2 Determine the best time for new posts
You will see the number of visitors at a specific time under "When are the fans online" in the "Posts" tab. Facebook uses a display with weekdays for this statistics. You will immediately see on which day and at what time, are the most fans online. Thus, you can always publish new posts at an optimal time of the day.

3 Analyse individual posts
Click on one of the listed posts in the "Overview". You will immediately see how many persons you have reached, how many of them have clicked on "Like" or have left a comment and also how many evaluate it negatively or have reported it as spam. The best option is to analyse a good and a poorly running post in order to find out what your fans want.

4 Learn more about your own fans
The platform statistics show the average age and gender of your visitors in the "People" tab. If the analysis gives a very clear result such as "94 percent are men between 18 and 24 years", you should align your contents towards this target audience.

PHOTO: MARKUS HERMANNSDORFER

5 Find the percentage of real fans

If you have published something recently, then you will see the recent posts in the tab "Posts" of the platform statistics. Open the list "Reach" there and select "Reach: Fans/Non-fans". Subsequently, move the mouse pointer to the coloured bar under "Reach". Facebook will now show how many people who have seen your post were already fans of your page.

6 Determine interaction rate

Since Facebook thrives on participation, whether your visitors view only the posts or they also share and comment, plays a huge role. Open the "Likes, comments and shares". Here, select the »Engagement rate«. Under "Engagement rate", you will now see how many persons who have viewed your post, have performed an action. If the interaction rate is low, then write a request "Please share" in your next posts and observe whether and how the interaction rate increases via the request.

7 Check who does not like the page

To determine the skip rate of the page, go to the tab 'Likes" and move the mouse pointer to the red area of the statistics 'Likes (net)". You can now determine the exact number of persons who no longer like your page. If you do not like the interactive display, then click on the left on »Dislike« to show only the numbers.

8 Download the statistics

If you wish to evaluate your statistics further in Excel, then click on "Export". Select a suitable "Data type" and the "Period". Under "File Format", use either "Excel (.xls)" or set 'Values separated by comma (.csv)" if you are working with another table calculation. If the statistics also include information for viral propagation of the posts, then enable the option "Export data with old template". Finally, you can download the statistics by clicking on "Export data".

Tips & Tricks

FEBRUARY 2016

The Edge browser brings along its own password management

WINDOWS

01 WINDOWS 10
Display the data utilisation of the last 30 days in the network

Windows 10 shows which program has sent how much data in the last 30 days

You can display your data utilisation for the last 30 days in Windows 10. Click on the "Windows" icon on the bottom left and go to "Settings". Now go to the category "Network and Internet Connection". Click on "Data usage" on the left. The network traffic of the last 30 days will be displayed here. The "Network utilisation" of the various programs will be listed via "Usage details".

02 WINDOWS 10
Play old games and applications in the latest Windows

There is a function in Windows 10 with
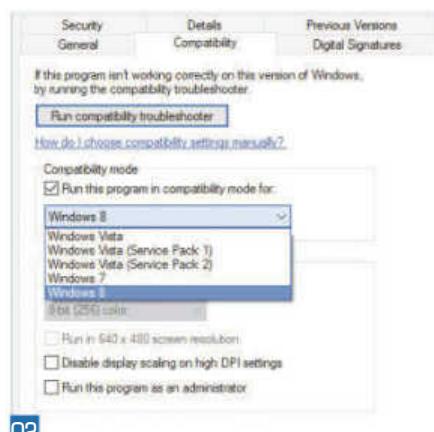
Windows 10 can also mock another operating system for older programs

which you can start older programs and games which are actually no longer compatible with Windows 10. Look for the EXE file of the program which you wish to start in the compatibility mode. Open the context menu by right-clicking on it. Here, select the option "Properties". Now set a check mark for the function "Run program in compatibility mode for:". After the list has opened under it, you can select Windows version earlier up to Vista. The settings will be applied by clicking on OK. You can start the program as per usual.

03 WINDOWS 10
Manage stored passwords in the Edge browser

Microsoft Edge has an integrated password manager which can help you save and manage passwords. We will explain to

you where you can find the function and also show you an alternative method. Start Edge and click on the three dots in the upper right corner. In the following dropdown menu, select "Settings" and scroll all the way down till you can click the option "Show advanced settings". Under Privacy settings, you can not only activate or deactivate the storage of passwords but also manage the stored passwords. Click on this option. Now all those websites will be displayed to you for which you have saved the passwords.

By clicking on the "X", you can delete the respective password. If you wish to edit the user name or the password, then double-click on the corresponding website. The stored name will be shown openly to you. However, the password will not be revealed.

If you need the password to be displayed as clear text then go to the Control Panel and select the category "User accounts". You will find all the passwords stored in Microsoft Edge in "Manage your credentials". Select the desired website here and then click on "Show". You will be able to see the password after confirming a security question.

04 WINDOWS 10
What to do if the Start menu is not working

Sometimes it may happen that the Start menu of Windows 10 does not work. There are various methods to resolve this problem. In many cases, restarting Windows will do the job. Go to the desktop and press the key combination [Alt] + [F4]. Now select "Restart" and click on OK to

You can restart the crashed Windows Explorer via PowerShell

In Data Security settings on Windows 10, disable everything that is not absolutely required

and then type "powershell".

In the PowerShell, type the command "Get-appxpackage-all*shellexperience* -packagetype bundle |% {add-appxpackage -register -disabledevelopmentmode ($_.installlocation + "\appxmetadata\ appxbundlemanifest.xml")}" (without the curly brackets). After the process is complete, also type "Get-AppxPackage | %{Add-AppxPackage -DisableDevelopmentMode -Register "$($_.InstallLocation)\ AppxManifest.xml" -verbose}". Finally, click on "File > Run new task" in the Task Manager. Here, type "explorer.exe" and confirm with OK.

05 WINDOWS 10
Stop Microsoft from eavesdropping on your privacy

Windows 10 has the makings of a real data sponge. No other operating system will collect so much personal data. Microsoft already grants itself a row of access rights to private data during installation. While installing Windows 10, if you select "Express-Settings" then you are automatically giving extensive access rights to Microsoft. During installation, click on "Customise settings" during the installation. Disable as many options as possible. You can activate the Smart Screen protection if you are not using any other virus protection.

Every Microsoft account is linked with an ID through which the company can link the collected app and browser data with your mail address and name. It is possible to not register for a Microsoft account and use a local account but then services like Cortana will no longer work.

In any case, you should customise the privacy settings in Windows 10. For this, press [Win] + [I] and click on "Privacy". Disable the option "Let apps use my advertising ID for experiences across apps". You should allow access to your location only to specific apps like a map service. For this, set the corresponding slider to "On" or "Off". Camera access, microphone access, account information, contacts and calendar are also important. Allow access to the corresponding data which you actually

confirm the reboot.

Some virus scanners cause this error in the Start menu. Uninstall your antivirus software after testing. If the Start menu starts working, install another virus scanner and update it to the latest version.

If the Windows Explorer is at fault then open the Task Manager by pressing [Ctrl] + [Shift] + [Esc]. Click on "More Details" on the bottom left. Scroll to the section "Windows processes" in the "Processes" tab and search for the option "Windows Explorer" there. Right-click and select "Restart".

A temporary switch from the usual Start menu in the Tablet mode can also resolve this problem. Press [Win] + [A] to show the Info Centre. Click on the icon "Tablet mode" on the bottom left. The Start menu should be displayed in the full screen mode by clicking on the Start button. Press [Win] + [A] again and then click in the Info Centre on "Tablet mode" in order to go back to the Desktop Start menu.

The EDB Log file may also be another cause of this problem. In Windows Explorer, go to the path "C:\Users\Name\AppData\ LocalTileDataLayerDatabase" where you can replace the "Name" with your user name. Look for the file "EDB00001.log" and delete it. Instead of "1", any random number can be in the file name. If the file cannot be deleted then press [Win]+[X] and select "Computer Management". Go to the area »Services and Applications« and stop the service »tiledatamodelsvc« there.

The last method is via the PowerShell. First press [Ctrl] + [Shift] + [Esc] to open the Task Manager. Now disable "Windows Explorer" using "End Task" under "Windows Processes". Then, go to "File > Run new task" in the menu bar of the Task Manager

use and which can function as such. For example, Skype needs access to the camera, microphone and your account.

Cortana might be useful but Microsoft reveals your location, contacts, voice input, information from Emails and SMS, browser and searches, calendar details and much more. If you do not use the voice assistant regularly then it is best to deactivate it. Unfortunately, the transmission of personal data to Microsoft under Windows 10 cannot be fully blocked. Even when services like Cortana are disabled, Windows 10 sends some information to Microsoft.

06 WINDOWS
**Open the Control Panel using command prompt**
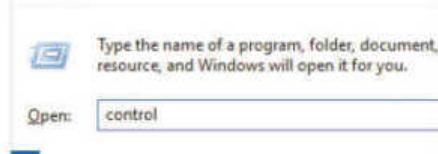
The Control Panel in Windows can be accessed even via the command prompt

If you work with command prompt, programs like Control Panel can be directly opened with a command. Call the command prompt with the key combination [Win] + [R] and type "control" and confirm

with the ENTER key.

07 WINDOWS 7
Setting up a working remote Desktop connection

Enable the Remote Desktop connection in this dialog
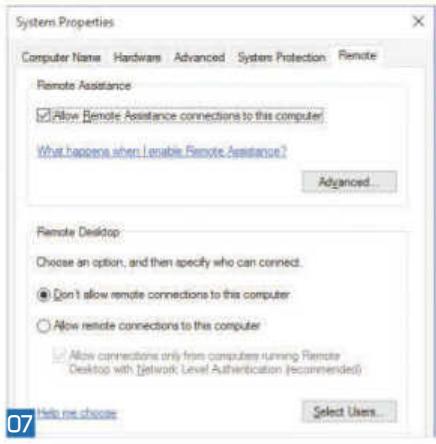
Setting up remote access of another computer is practical, for a variety of reasons. There are tools out there like TeamViewer which you can use to do this, but you don't necessarily need to install extra software to do this, as Windows has a remote access tool of its own. To do this, both the computers must be present and activated in the same network. Windows 7 Professional, Ultimate or Enterprise must be necessarily installed as an operating system on the computer to be controlled remotely outside of the local network. Any version of Windows 7 will work on the PC which you wish to use for the controls. Also ensure that the Port 3389 in your firewall is not blocked.

When the prerequisites are fulfilled, right-click on "Computer" in the computer that is supposed to be remote-controlled and go to "Properties". Then click on "Remote Settings" and switch to the tab "Remote" in the "System settings" window. Set a check mark before "Allow remote assistance connection with this computer" and enable the option 'Allow connection from computers on which any version of Remote Desktop is running (less security) '. Now click on "Select user". If you have logged in with your Administrator account, then this account will be added automatically. Otherwise click on "Add" and enter the user names which are allowed to connect to the PC. Confirm with OK.

On the computer that has the control, open the Start menu and type »Remote

desktop connection«. Click on the search result. Enter the name or the IP address of the computer to be controlled in the field "Computer" and confirm by clicking on "Connect". Windows will now ask your user name and password. Now set a check mark for "Save login info" so that you can be connected automatically next time. Click again on the "Connect" button.

08 WINDOWS 8
Individually change the cursor with a few clicks

In Windows 8, the fastest way to find the dialog is via a search query on the Metro interface
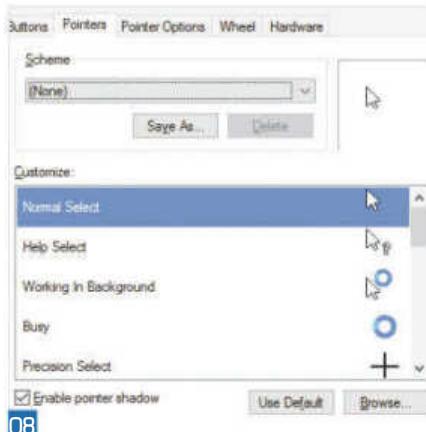
It is very easy to change the mouse pointer if you wish to use another one instead of the standard cursor in Windows 8. Click on the Windows icon in the taskbar and enter the term "Mouse pointer" in the search bar. Select the search result 'Change how the mouse pointer looks".

A new dialog box will open. If you wish to change the entire layout of the cursor, select a new design package via "Scheme". The other alternative is to customise the individual cursor icons where you click on the action under "Customise" and set a new icon via "Search". Finally, save your changes with the "Apply" button.

09 WINDOWS
How to activate the print spool service

You need a print spool service so that you can issue a print order to your PC. If it is not executed, then re-activate this service. To do this, open the "Control Panel" and click on "Administrative Tools > Services". Search for the service "Print management".
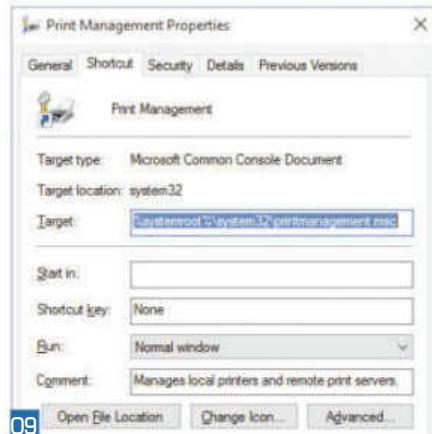
Ensure that the printing service is set on »Automatic«

Right-click and go to "Properties". Ensure that the option "Automatic" is set under "Start Type". Save with OK and finally restart your PC. You will be able to start printing immediately.

10 WINDOWS
Show the forgotten password of the home network
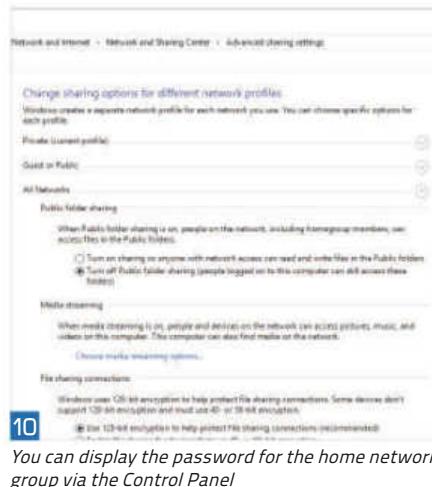
You can display the password for the home network group via the Control Panel

You have a new PC and want to integrate it in your home network. When you wish to connect to the home network group, you will be asked for a password - but what if you do not know it? No worries: The password will be shown to the creator of the home network group during installation. If you do not know who has set up the home network group then the password can be recalled from a member of the home network at all times.

Open the Control Panel and type the term "Home network group" in the search field on the top right. Note that the

computer used is a member of the home network. Subsequently select the option "HomeGroup". Under the option "More home network group actions", you will find the option "Show or print the password for the home network group". The password for the home network group in your network will now be displayed to you in clear text.

OFFICE

11 POWERPOINT
**Reflect objects vertically or horizontally in the presentation**

The objects and images added in PowerPoint can be reflected horizontally as well vertically. Ysou can use different reflections as artistic effects also. Select a random object. Go to "Start" and call the command group "Arrange" in the subgroup "Drawing". You will find the command "Rotate" under "Position objects". Drag the mouse over it and a menu will open where you will see the command "Reflect horizontally". You can create a reflection of your object with this command.

The same effect can be achieved when you drag the mouse on an anchor point on the right or left side of the selection. Keep the left mouse button pressed and the mouse pointer will change from a double arrow to a cross. Now drag the mouse horizontally over the object to the other side to get a reflection.

To reflect your object vertically, go to "Start > Arrange > Rotate > Rotate vertically". This effect can be achieved via an anchor point of the object selection which is visible on a smaller line over the upper margin of the selection. Keep the mouse button pressed and the mouse point will change into four arrows that run in circles. Keeping the mouse button pressed, you can now rotate the object in every angle.

If your PowerPoint presentation needs to look visually convincing, then select the object and call the dialog window "Format picture" in the command group "Drawing" via Start. The other option is to right-click on an object and select "Format picture" in the context menu.

You will find the option 'Reflection' in the window "Format picture". There is a drop-down menu hidden behind this point. Among other things, you can define the size and transparency of the object
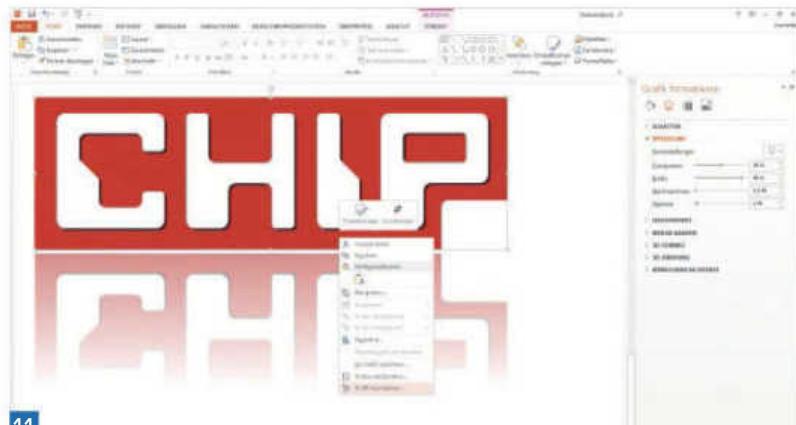
Using the elements on the right, you can control the transparency and size of the reflections

reflection with the same. Here, you have the option to manually control all sizes. Alternatively, you can choose from a range of presets.

12 OUTLOOK
Show all unread messages in the mail client
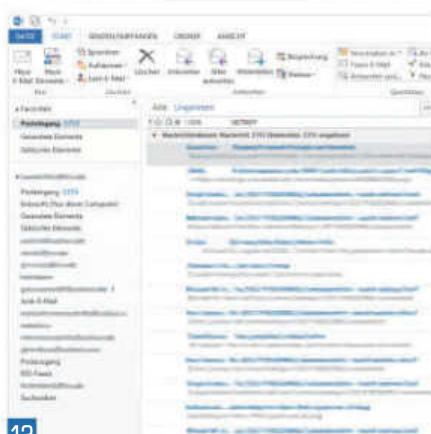
With one click, Outlook lists the unread Emails. Version 2010 needs a few clicks more

How do you display all your unread Emails in Outlook at once? This is possible with a click in Outlook 2013, but is a bit cumbersome in the 2010 version. In Outlook 2013, select the button "Unread" above the message list. This works in every folder of the inbox. Click on "All" and all the mails which you have already read, will also be displayed again.

In Outlook 2010, select the inbox which you want to search for unread mails. Ensure that you are on the "Start" tab. You will find the group "Search" on the extreme right in the menu group. Now select "Filter Emails" there and click on the option

"Unread".

13 WORD
What to do if the text editor constantly crashes
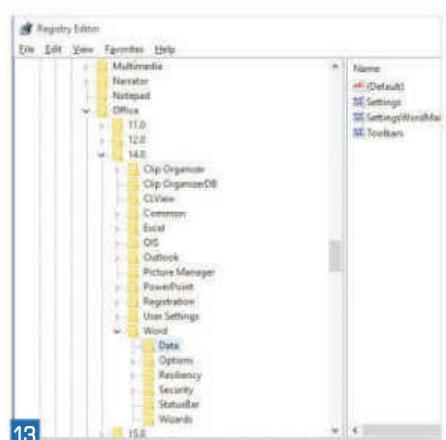
Disable the Add-ins for the error search. This may be the cause for Word crashing

If Word is constantly crashing, then check the registry, templates and Add-ins. In Windows click on "Start" and type "regedit" in the search field. Confirm the start of the Registry editor with "Yes". Go to the key "HKEY_CURRENT_ USER\Software\Microsoft\Office\14.0\Word\Data". Depending on the version of Word, there may be another number here, like 12.0 for Word 2007. In the menu, click on "Edit" and then on "Delete". Confirm the action with "Yes".

If this does not help, then search for the file "Normal.dot" or "Normal.dotm" in Windows. Delete the files when found. They will be automatically created again without any errors when you start Word the next time.

Defective Add-ins remain the last cause. In Word click on "File" and then on "Options". Now click on 'Security Centre' and then on "Settings for Security Centre". Here, select "Add-ins". Set the check mark for "Disable all application Add-ins" and restart Word. Subsequently, you should activate all Add-ins step by step to find the erroneous extension in this manner.

HARDWARE

14 ### BATTERIES
What you should absolutely know while charging the battery for the first time

Longer charging does not make any sense for Lithium-Ion batteries

If you are using a battery-operated device for the first time, then you should pay attention to the correct initial charging of the battery. We always keep reading in forums that the battery should be charged for 12 hours. This process is called re-conditioning; however, it makes sense only for Nickel-Cadmium batteries which are no longer used in the latest devices. Virtually every tech device today is provided with a Lithium-Ion battery. Here, charging the battery the first time for a long period is not effective. When the battery is fully charged, the power supply is automatically stopped. The only important thing is to fully charge the batteries for the first time. This does not improve the performance of the Lithium-Ion batteries but the accuracy of the charging status indicator. For example, when you unpack your new smartphone, the device must first learn how much power the battery can store at all. This is how the reliability of the battery display is ensured.

15 ### HARD DISK
Repair an external drive with defective USB port

The external USB disk works perfectly in the new casing

If the USB port of your external hard disk is defective, then a new casing will suffice. First, check whether the connection and not only the cable is defective. If the port is the culprit, then back up the data present on the hard disk. If the device has different ports, then use one of those. The other alternative is to remove the casing and back up the data via a SATA-to-USB adapter, which can be purchased online at a cheap price. You will need a new casing for the repairs as the USB controller sits in the casing of the hard disk. This also can be purchased online at an affordable price. Note the shape of the hard disk while buying. You will need a 3.5-inch disk and a 2.5 one for laptops. As port, select SATA as no one today uses the IDE anymore. When you receive the new components, open the old casing and remove the disk. The mechanisms for this are different for every manufacturer. Some casings are only screwed in; others are fixed with plastic clamps. The hard disk is mostly fixed using screws in case of 3.5-inch disk casings. When you have loosened the holding mechanism, carefully remove the hard disk from the casing and place it in the new casing in the reverse order. The device should now work without any problems.

16 ### ROUTER
Repurposing old routers

Your old router need not gather dust in the basement. You can also use it to improve your home or office network. We will give you three options for it. You can extend your WiFi network and its coverage using

You can separate the home network from the office network using an old router

an Access Point. The easiest way is to connect the old router to your main router via a LAN cable and you will already have an improved WiFi coverage. You just need to connect your devices via WiFi to the old router.

If both the routers have a WiFi Repeater function, then you can even expand your signal wirelessly. For this, you have to just connect both the routers via the Repeater function so that an Internet connection is established. You can then couple other devices to the old router via WiFi.

But in this case, note that the available bandwidth of your wireless home network is halved.

If you work from home, you can separate the home network from the office network using the old router.

Connect all devices for your home network to the main router. Subsequently, connect both routers with a LAN cable and then connect all devices for the office network to the old router. You must specify a different IP address on every router in the router settings (Example 192.168.1.1 and 192.168.1.2) - Done!

17 ### PROJECTOR
What to do if white dots interfere in the picture?

A projector brings the cinema experience to your living room. However, it gets quite annoying when white dots appear in the picture. What could be the reason? First, take a look at the HDMI or the VGA cable that connects the projector to the playback device. It is quite improbable that the source of error lies here but there is no harm in trying to solve the problem by quickly changing the cable.

Subsequently, clean the lenses with a towel, possibly it is soiled. Now pull the

Subscribe & Win!
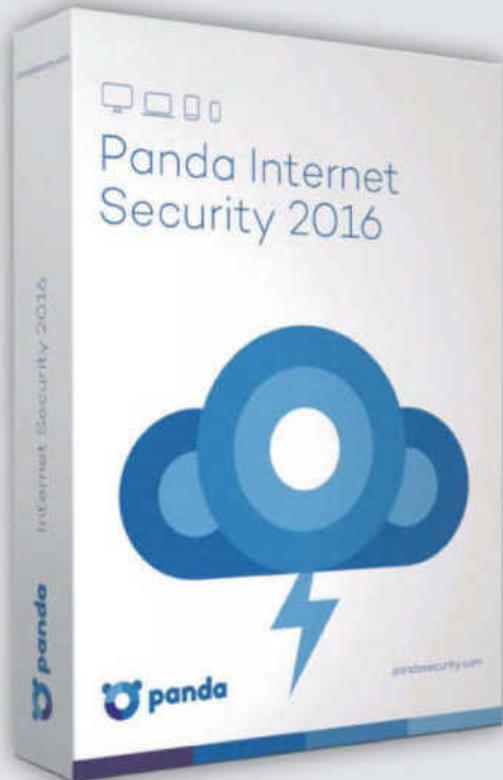
PC security is now more important than ever before, in no small part thanks to more and more people going online, be it on their PCs, laptops, smartphones and tablets. This month, subscribe to CHIP Malaysia and stand a chance to win a copy of Panda Internet Security 2016.

Panda Internet Security 2016 protects your Windows PC, Mac, Android devices, as well as iOS devices such as your iPhones and iPads. On top of that, it is also designed to ensure you can enjoy your online life with complete peace of mind. The software also comes with parental control features that allows children to freely use the web without the parents having to worry about them accessing inappropriate content.

Do you require a backup solution? With Panda Internet Security 2016, you can specify the files that you want to protect, and use your computer without the fear of losing valuable information. You can also safeguard access to your data, documents or any sensitive information, as Panda provides you the ultimate barrier against ransomware such as Cryptolocker.

WEST MALAYSIA
1 year = RM125.93 *(with GST)* + 4 Free Issues
6 months = RM62.96 *(with GST)* + 2 Free Issues

EAST MALAYSIA
1 year = RM147.13 *(with GST)* + 4 Free Issues
6 months = RM73.56 *(with GST)* + 2 Free Issues

EFFECTIVE _____ ISSUE

☐ **Subscription renewal, Subscription code:** _____

PERSONAL INFO *(Please write neatly in BLOCK letters)*

Name Mr/Ms/Dr .... **NRIC** ....

Mailing Address ....

....

Postal Code ....

Phone OFF/HOME .... **H/P** .... **E-mail** ....

PAYMENT INFO *(Please ☑ tick ONE of each of the following)*

☐ I have enclosed a cheque in favour of Online Dynamics (M) Sdn. Bhd.

Cheque No .... **Name of Bank** ....

Money/Postal Order No. ....

Signature
Date _____

SUBSCRIPTION VIA CREDIT CARD, KINDLY LOG ON TO 'www.chip.com.my' FOR IMMEDIATE PROCESSING
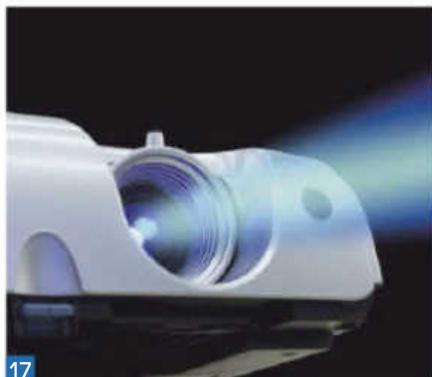
If the lenses are soiled, then the particles will be seen as ugly artefacts in the picture

power plug and take a look at the inside of the projector. Remove the dust from the insides with a bit of compressed air. Use a small bellow like the one used for cleaning camera lenses, to remove the dust from the DLP chip. If this also does not help, then the DLP chip must be defective. Therefore, that does not necessarily make the projector unusable. It may be quite worthwhile to take a look at the chip and to look for a replacement on eBay - there are many models available for a few ringgit.

18 SCREEN
The brightness of the display cannot be changed – it will work again
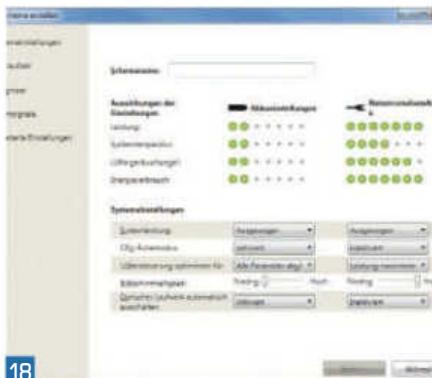
Tools (from Lenovo here) often control the settings. Uninstalling software may lead to problems

If the screen brightness on the laptop cannot be controlled, then there may be due to several causes. On one hand, the graphic drivers can be at fault: Search for the latest drivers on the website of the manufacturer. Software from third party providers may also lead to problems. If you installed such a software recently, for example, a Hotkey software to control

the card, then install it again. This way, you can check whether the error lies here. Another cause of error may be in the power control. You will find the "Power options" in the Control Panel under the category "System and Security". You can change the brightness manually there. If this also does not help, then there is another trick: Change the brightness in the control panel and switch the computer to power-saving mode. In case of laptops, for example, you have to open the laptop to get this fixed. Subsequently, switch on the computer again and the brightness would have changed. In some cases, it may happen that Windows no longer perceives the screen as active. To change this, right-click the Monitor in the Device Manager and select "Activate".

19 CHROMECAST
Is it worthwhile to connect a Multimedia stick to the projector?

Chromecast can also be used on the projector using the delivered power supply

If you wish to use your Chromecast stick not only on TV but also with the projector, then that is not a problem at all. Simply plug it into the HDMI port. However, you will mostly not find any ports on the projector which supply power to the Chromecast. Therefore, you will need a power supply for the stick.

Chromecast delivers only 720p resolution on the projector. This is quite good for most of the streaming contents - as long as the network connection is good enough. Otherwise the quality will be reduced. If the WiFi reception on the projector is not good, then there is a separate solution in the form of the Chromecast-Ethernet adapter: The adapter supplies power to the stick via the micro-USB connector and network data from the

connected Ethernet cable.

20 GOPRO
What you should note while buying a used action camera

The popular action cameras by GoPro cost quite a lot, which can make buying a second-hand camera a lot more logical. Action cams are often used for risky sports like mountain biking, mountain climbing, Motocross, BMX or skateboarding and snowboarding where falls cannot be avoided. The protective casing of a used GoPro may show scratches and small dents but it should still be intact and water-proof to protect the camera.

Pay attention to the accessories and check whether the equipment complies with the desired area of use. The action camera can be used in various ways if you have the correct accessories. For example, a suction cup is vital for fixing the GoPro onto a car. The accessories should also be flawless and intact.

To start directly, a compatible SD card with appropriate reading speed must be included in the package, apart from the classic holders and fixtures. Contact the seller and set up an appointment to check the GoPro for its status and check if it's working.

If possible, do not pay for the camera in advance but try to close the deal when you're convinced that the camera is still in working condition.

Check whether the action cam has a remaining warranty and whether the seller has an invoice as private sellers mostly exclude a product return. ▣

While buying a used GoPro, pay attention to scratches or other damages

13/1/2016 – Grooving to the thin grooves of Philips monitors

26/1/2016 – Getting ready to raise it high at the honor 5x Launch

12/1/2016 – MSI teaching you how to train dragons at Lowyat Plaza

26/1/2016 – An "honor"-able match at The Glass House
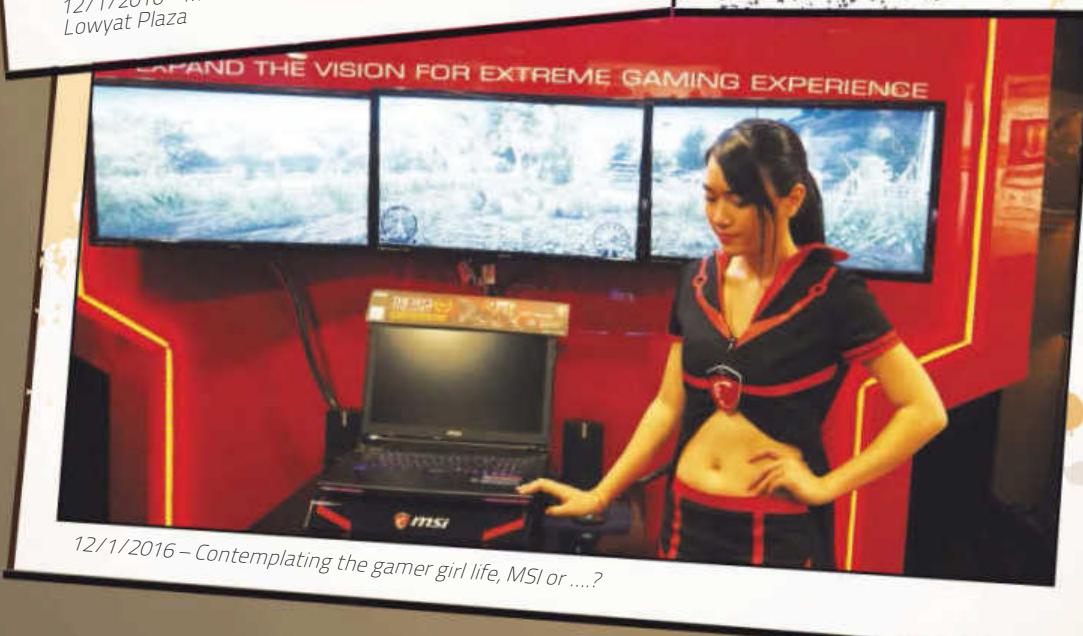
12/1/2016 – Contemplating the gamer girl life, MSI or ....?

13/1/2016 – Take a break, take a selfie at the ASUS Zensation event

12/1/2016 – Even a Haier TV can get VIP treatment at St Giles The Gardens

26/1/2016 – Philips monitors aren't the only thing that catches the eye at the event

26/1/2016 – Thomas and Jack are back with some honor feedback

27/1/2016 – Looking fancy with the Olympus PEN-F

Forgot Your Password?

What can you do if you accidentally locked yourself out of your PC, or worse, your online accounts?

Give New Life To Old Hardware

Just because your devices are old, doesn't mean they're useless. In this article we take a look at how you can make the most out of outdated hardware
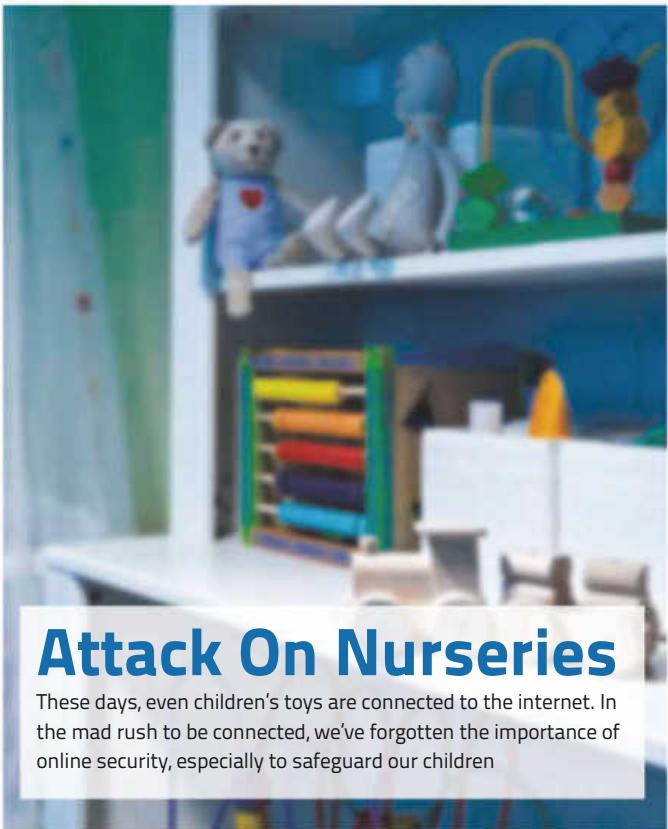
Attack On Nurseries

These days, even children's toys are connected to the internet. In the mad rush to be connected, we've forgotten the importance of online security, especially to safeguard our children